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THE HARRINGTON & KING PERFORATING CO.

GRILLES OF PERFORATED METAL

SUGGESTED DESIGNS FOR ENCLOSED RADIATORS

GRILLES

of
PERFORATED
METAL

A Catalog and Hand Book

Issue No. 28

ENCLOSURE A

ENCLOSURE B

OPEN AREA
OF GRILLE

THE HARRINGTON & KING PERFORATING CO.

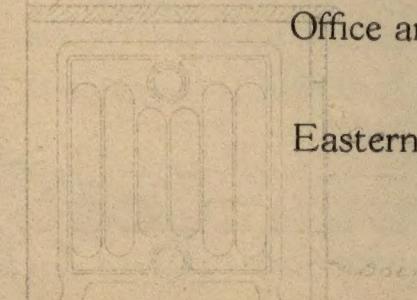
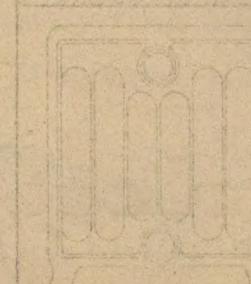
Office and Factory: 5655 Fillmore St.
CHICAGO

Eastern Sales Office: 114 Liberty St.
NEW YORK

ENCLOSURE C

THE ENCLOSURE ON THE LEFT IS FRE-
QUENTLY SEEN. BUT IT IS A VERY POOR
DESIGN - THE COLD AIR CANNOT FLOW IN
TO THE CAR THE WARM AIR OUT.

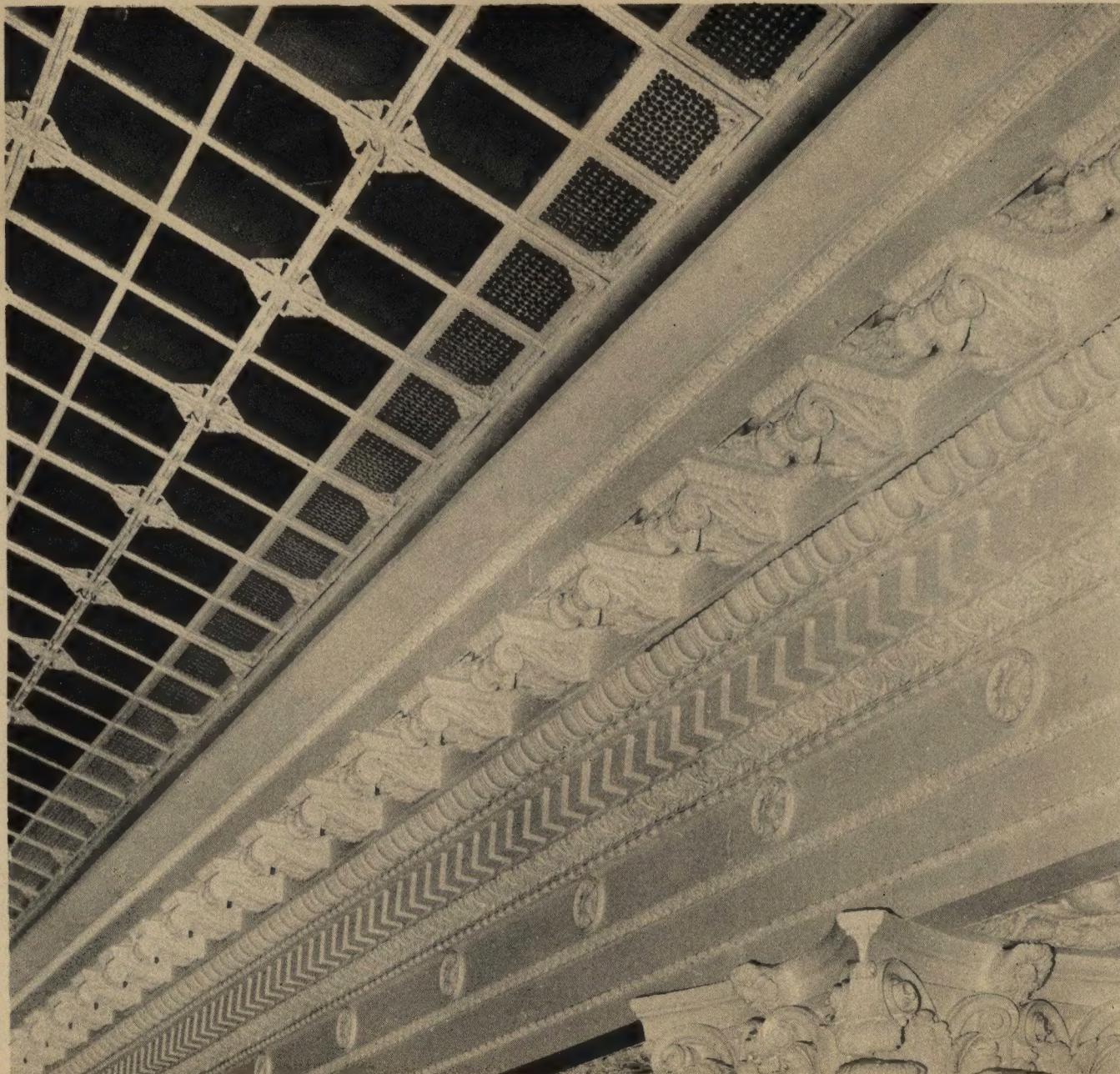
Copyrighted 1928
The Harrington & King Perforating Co.
Chicago



GRILLES OF PERFORATED METAL

First National
Bank, Chicago

A section of the inside glass skylight around which there are 136 grilles of our style M Design. This skylight is over the main banking floor and the grilles provide for ventilation.



Leonard
Construction Co.
Chicago
Architects and
Engineers

Introduction.

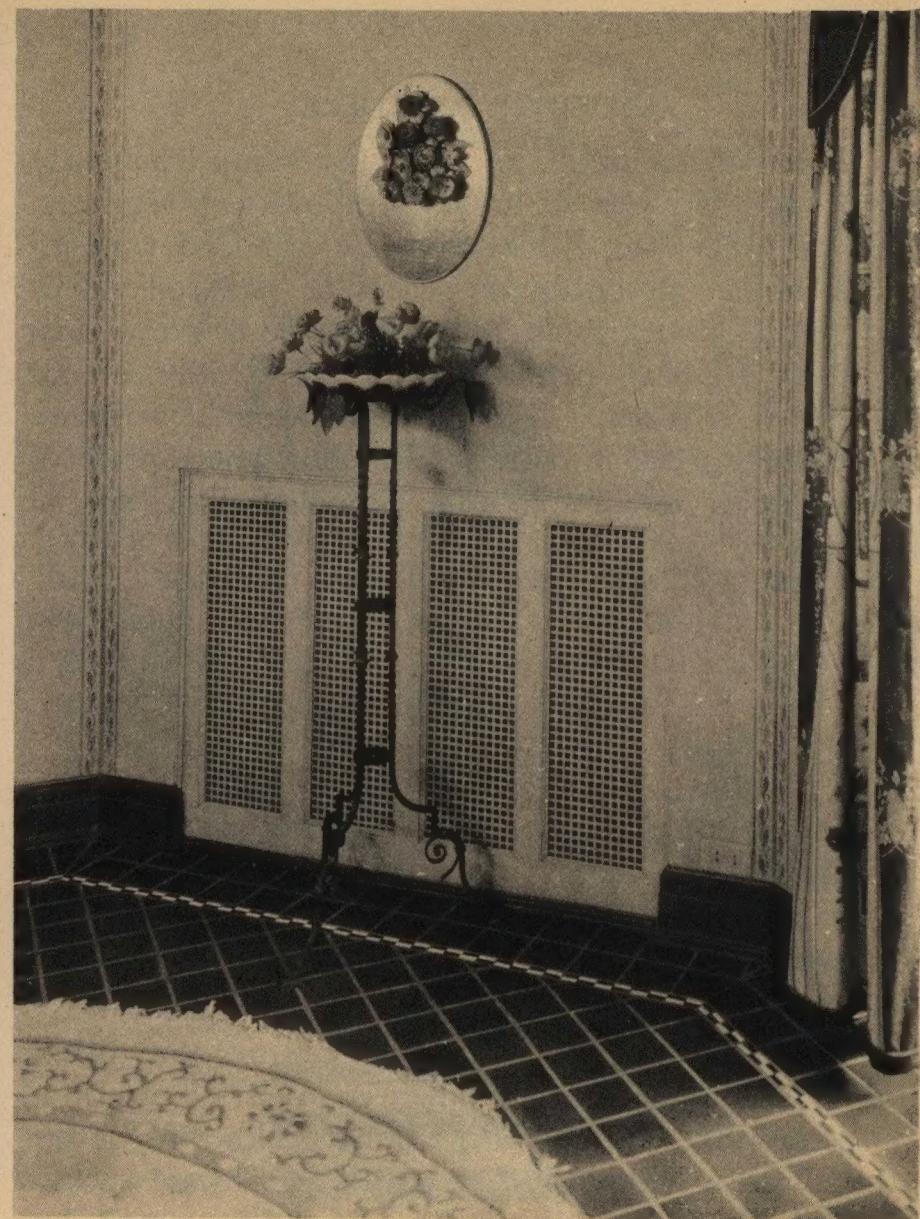
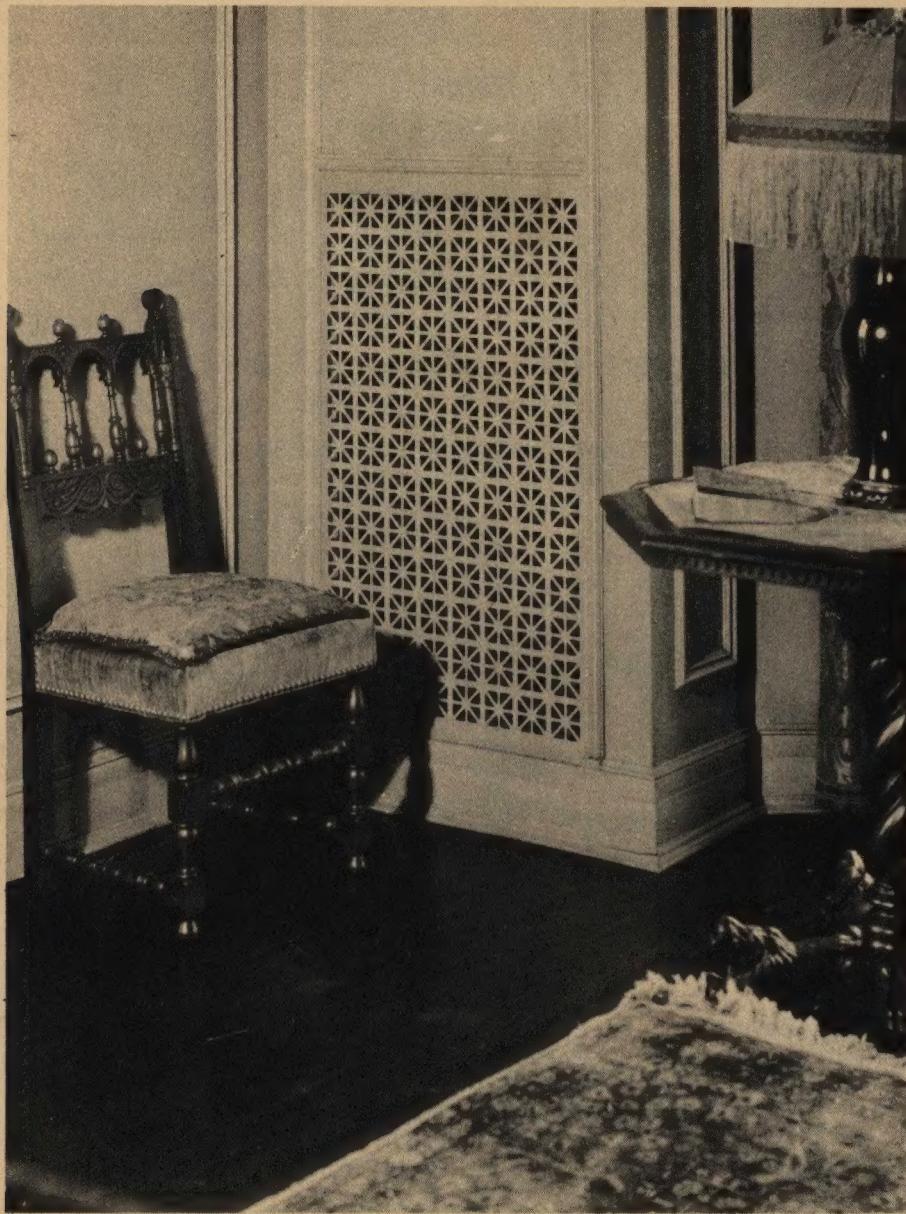
For fifty years we have devoted all of our efforts to the production of perforated metals. In 1923 we built a new plant which embodies every improvement not only of actual plant construction but of modern factory equipment and layout for greatest efficiency and economy of production. It is the largest and finest plant in this country devoted exclusively to the production of perforated metals and we know of none better or larger in the world.

In this new plant special facilities have been provided for the manufacture of Grilles of Perforated Metal. Grilles must be accurate in design, size and shape. They must be absolutely flat. They must be finished without flaw or blemish. Many grilles must have screw holes carefully located, frames made to special measurements, invisible hand hole doors, register shutters and other attachments accurately fitted. Our facilities have been carefully perfected and we are today furnishing a greater selection of punched grille designs which are produced with greater care and finer finish than have ever before been obtainable.

Our grilles are made by punching the designs in sheets and plates of solid steel, bronze, brass and other metals. They are not brittle as are cast grilles, they are not flimsy as are pressed grilles, but are rugged and substantial in appearance and in actual strength. Because of the process of manufacture as well as our complete facilities, the cost of our Grilles of perforated Metal is only a fraction of the cost of cast grilles. To the greater strength, lesser cost, and artistic appearance of our grilles must be added our absolute guarantee of workmanship and the excellence of service and promptness of delivery which grille shipments require.

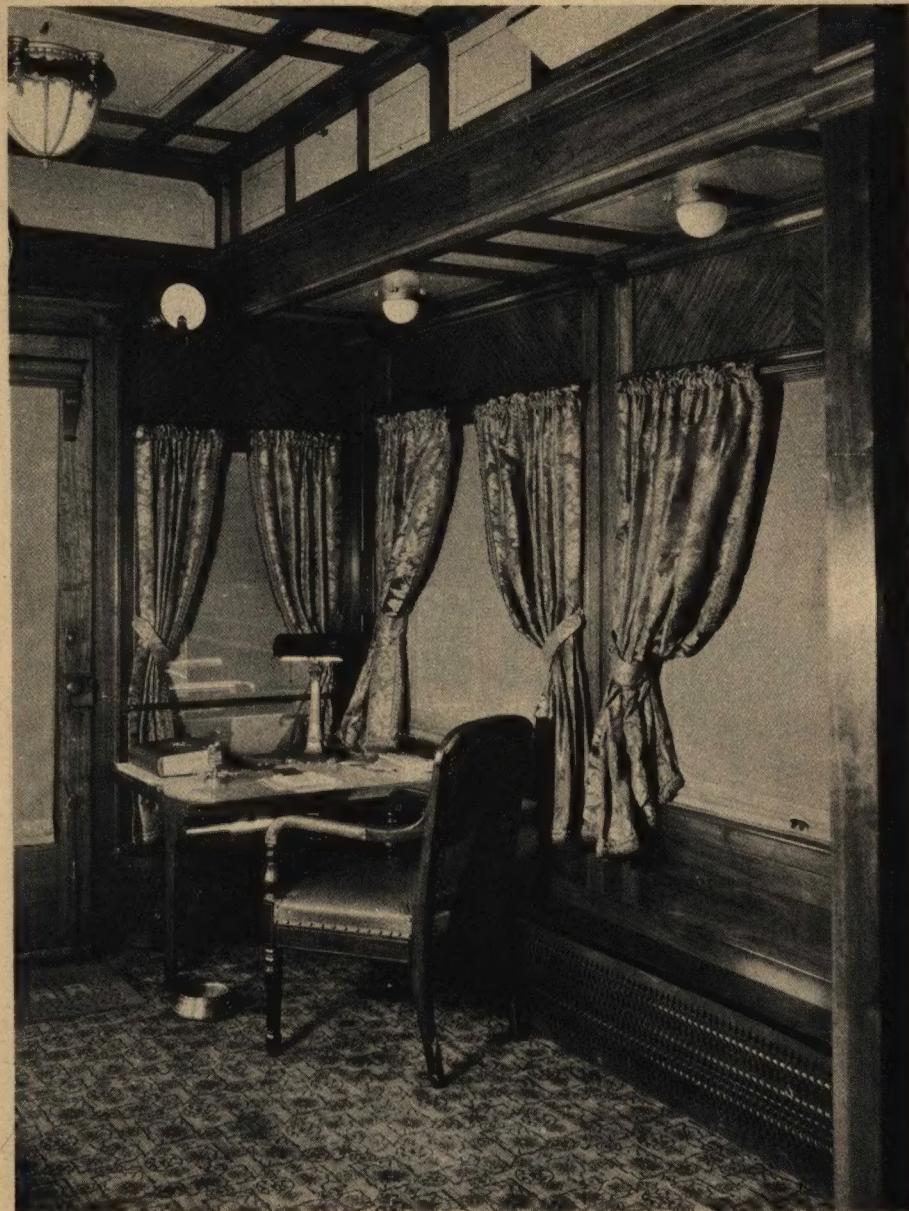
The creation of new designs which we wished to present to our rapidly increasing circle of users and the desire to compile a hand book of grille information which would be of real value to architects, engineers and contractors has prompted us to offer this, our third edition of GRILLES OF PERFORATED METAL.

THE HARRINGTON & KING PERFORATING CO.



Residence of Neil C. Hurley, River Forest, Ill., Philip B. Maher, Architect.

GRILLES OF PERFORATED METAL



Grilles in President's Private Car, Chicago & Alton Railroad

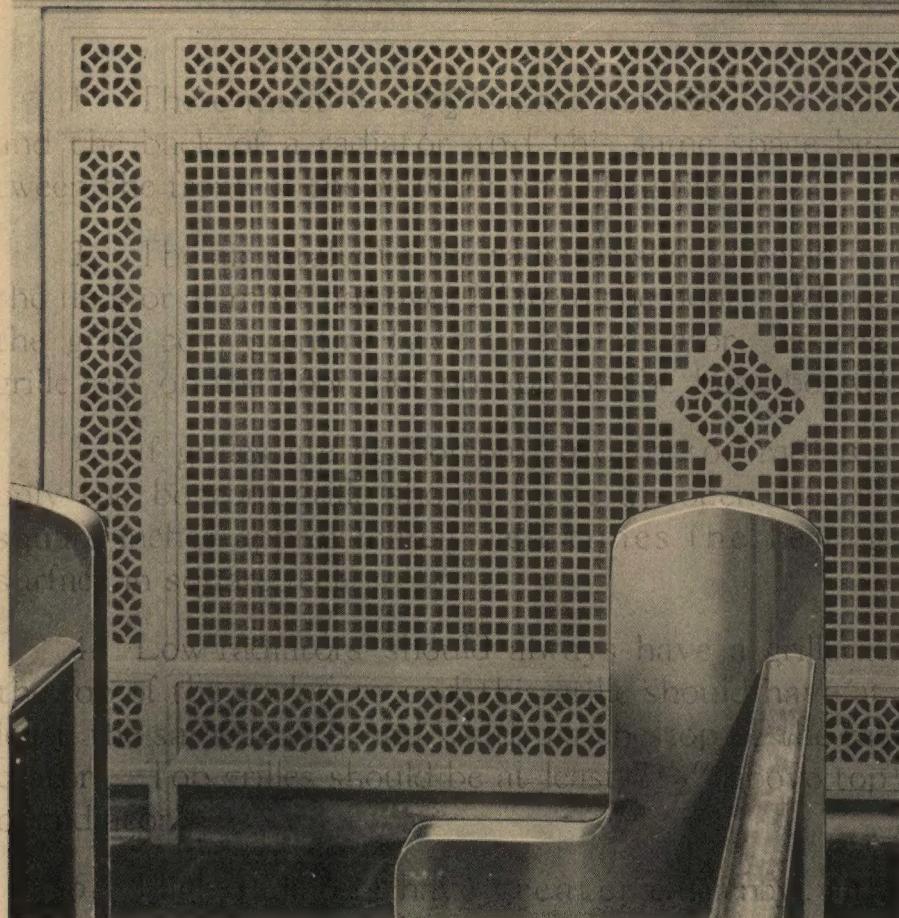


Grilles in the Winter Garden on the Steamship Leviathan

THE HARRINGTON & KING PERFORATING CO.

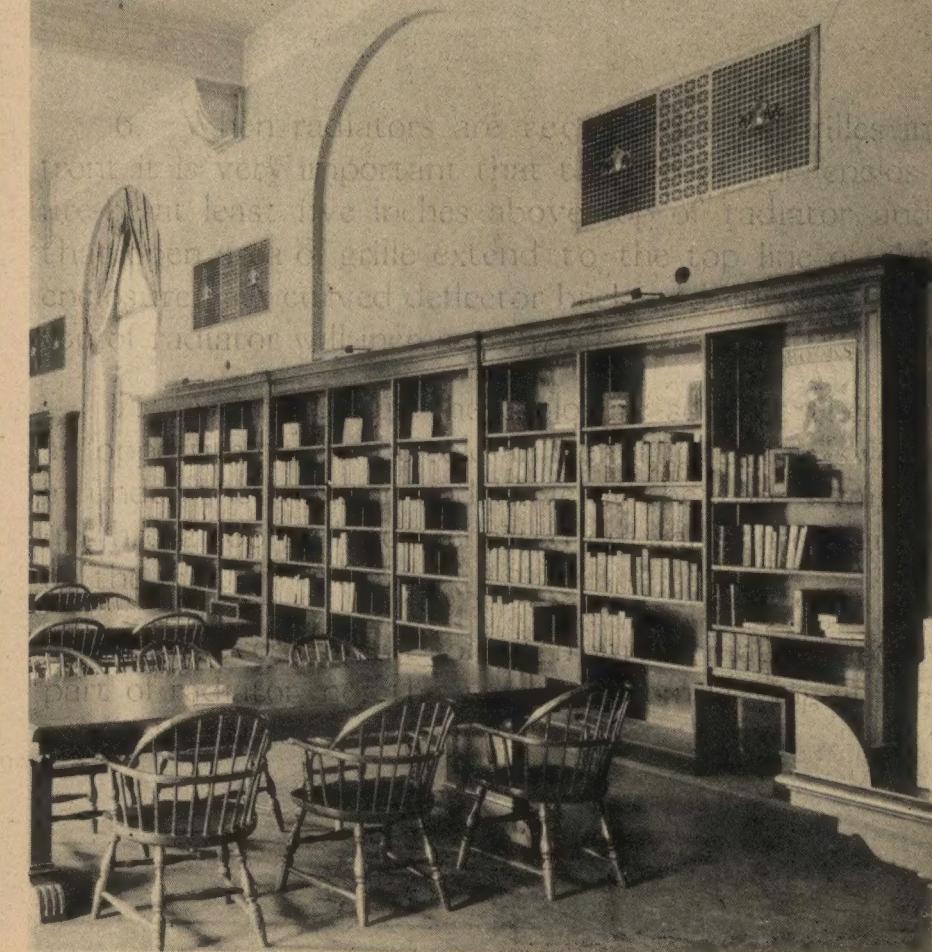
DESIGN OF GRILLES FOR RADIATORS

We are frequently called upon to design grilles for properly heating the rooms. Almost without exception the radiator is enclosed by one or more grilles. We have, therefore, made out a simple analysis of many installations to determine the greatest radiator efficiency.



Typical church installation.

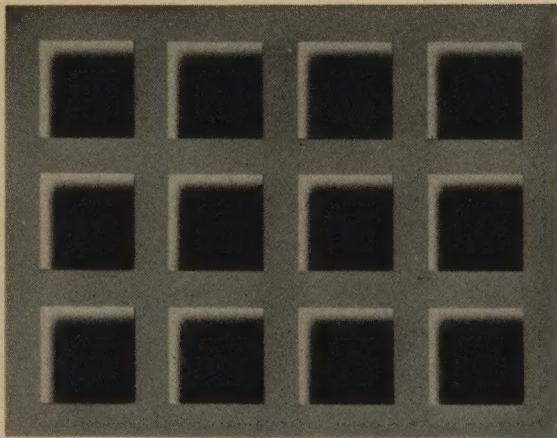
After much study and experiment we find the trouble due to improper design of the grille. After a great deal of study and based on this study which involved much consideration the following recommendations for



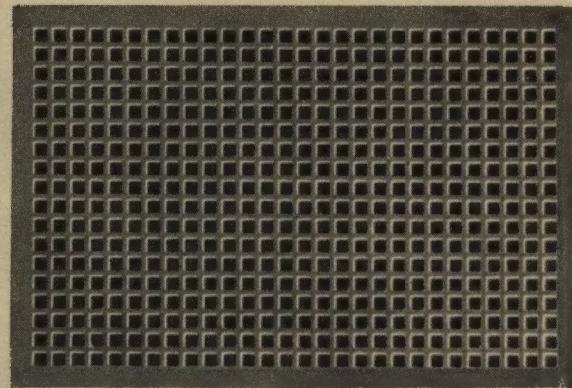
Special grilles in a library

GRILLES OF PERFORATED METAL

1/2" PLAIN LATTICE SPECIAL 3/16" BRIDGES



ACTUAL SIZE - 1/2" PLAIN LATTICE SPECIAL
53% OPEN



1/2" PLAIN LATTICE SPECIAL 3/16" BRIDGES
53% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,

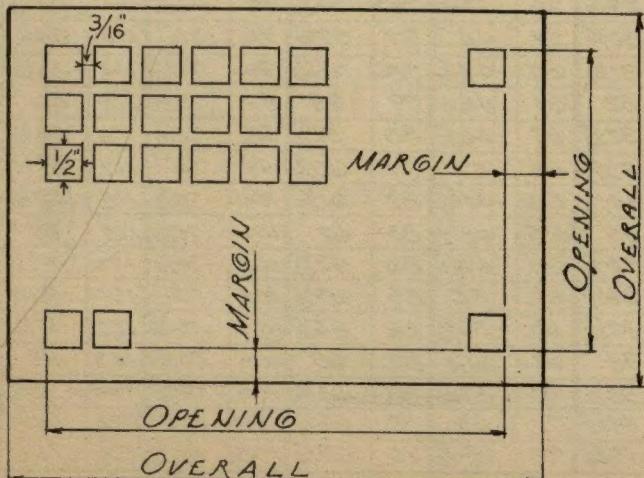
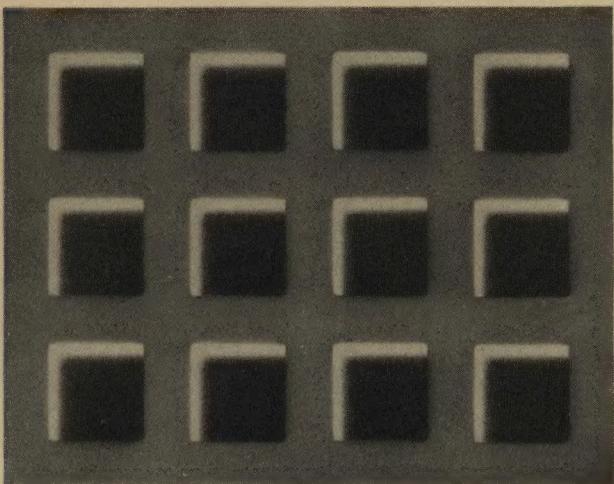


TABLE OF OPENING SIZES

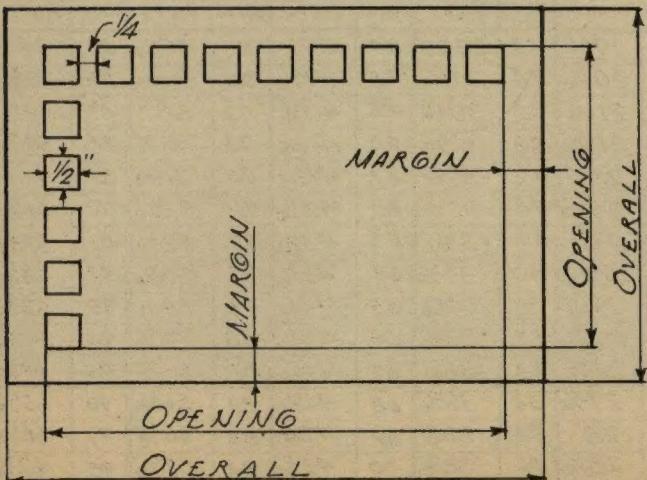
No of Holes	OPENING SIZES										
1	1/2"	15	10 1/8"	29	19 3/4"	43	29 3/8"	57	39"	71	48 5/8"
2	1 3/16"	16	10 7/16"	30	20 1/16"	44	30 1/16"	58	39 5/16"	72	49 5/16"
3	1 7/8"	17	11 1/2"	31	21 1/8"	45	30 3/4"	59	40 3/8"	73	50"
4	2 9/16"	18	12 3/16"	32	21 3/16"	46	31 1/16"	60	41 1/16"	74	50 5/16"
5	3 1/4"	19	12 7/8"	33	22 1/2"	47	32 1/8"	61	41 3/4"	75	51 3/8"
6	3 15/16"	20	13 9/16"	34	23 3/16"	48	32 13/16"	62	42 1/16"	76	52 1/16"
7	4 5/8"	21	14 1/4"	35	23 7/8"	49	33 1/2"	63	43 1/8"	77	52 3/4"
8	5 5/16"	22	14 5/16"	36	24 9/16"	50	34 3/16"	64	43 9/16"	78	53 7/16"
9	6"	23	15 5/8"	37	25 1/4"	51	34 7/16"	65	44 1/2"	79	54 1/16"
10	6 1/16"	24	16 5/16"	38	25 5/16"	52	35 1/16"	66	45 3/16"	80	54 1/16"
11	7 3/8"	25	17"	39	26 5/8"	53	36 1/4"	67	45 7/8"	81	55 1/2"
12	8 1/16"	26	17 1/16"	40	27 5/16"	54	36 13/16"	68	46 9/16"	82	56 3/16"
13	8 3/4"	27	18 3/8"	41	28"	55	37 5/8"	69	47 1/4"	83	56 7/8"
14	9 1/16"	28	19 1/16"	42	28 1/16"	56	38 5/16"	70	47 5/16"	84	57 7/16"

THE HARRINGTON & KING PERFORATING CO.

$\frac{1}{2}$ " PLAIN LATTICE GRILLE

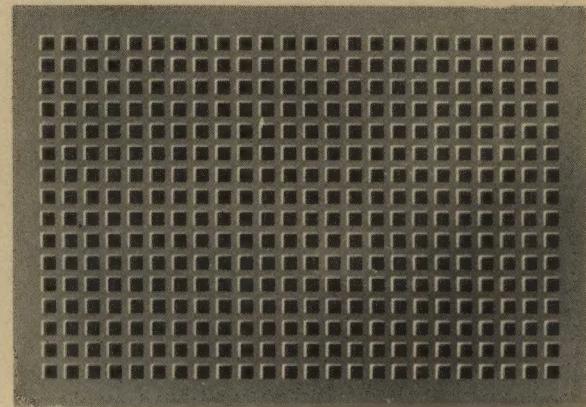


ACTUAL SIZE
1/2 HOLES, 1/4" BRIDGES, 45% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



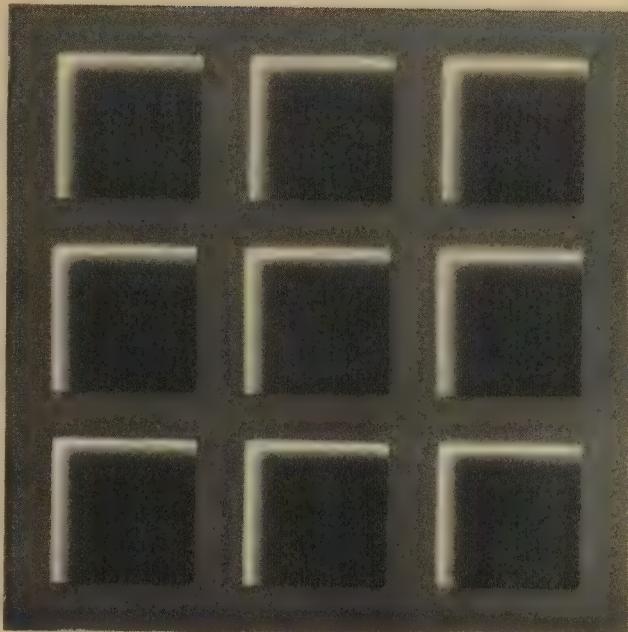
$\frac{1}{2}$ " PLAIN LATTICE GRILLE
45% OPEN

TABLE OF OPENING SIZES

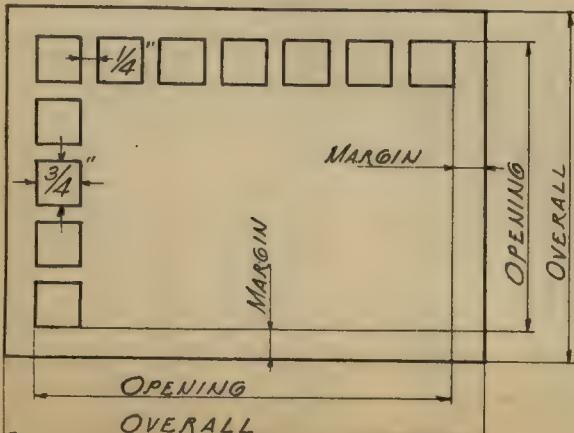
NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	1/2"	19	14"	37	27 1/2"	55	41"	73	54 1/2"	91	68"	109	81 1/2"
2	1 1/4"	20	14 3/4"	38	28 1/4"	56	41 3/4"	74	55 1/4"	92	68 3/4"	110	82 1/4"
3	2"	21	15 1/2"	39	29"	57	42 1/2"	75	56"	93	69 1/2"	111	83"
4	2 3/4"	22	16 1/4"	40	29 3/4"	58	43 1/4"	76	56 3/4"	94	70 1/4"	112	83 3/4"
5	3 1/2"	23	17"	41	30 1/2"	59	44"	77	57 1/2"	95	71"	113	84 1/2"
6	4 1/4"	24	17 3/4"	42	31 1/4"	60	44 3/4"	78	58 1/4"	96	71 3/4"	114	85 1/4"
7	5"	25	18 1/2"	43	32"	61	45 1/2"	79	59"	97	72 1/2"	115	86"
8	5 3/4"	26	19 1/4"	44	32 3/4"	62	46 1/4"	80	59 3/4"	98	73 1/4"	116	86 3/4"
9	6 1/2"	27	20"	45	33 1/2"	63	47"	81	60 1/2"	99	74"	117	87 1/2"
10	7 1/4"	28	20 3/4"	46	34 1/4"	64	47 3/4"	82	61 1/4"	100	74 3/4"	118	88 1/4"
11	8"	29	21 1/2"	47	35"	65	48 1/2"	83	62"	101	75 1/2"	119	89"
12	8 3/4"	30	22 1/4"	48	35 3/4"	66	49 1/4"	84	62 3/4"	102	76 1/4"	120	89 3/4"
13	9 1/2"	31	23"	49	36 1/2"	67	50"	85	63 1/2"	103	77"	121	90 1/2"
14	10 1/4"	32	23 3/4"	50	37 1/4"	68	50 3/4"	86	64 1/4"	104	77 3/4"	122	91 1/4"
15	11"	33	24 1/2"	51	38"	69	51 1/2"	87	65"	105	78 1/2"	123	92"
16	11 3/4"	34	25 1/4"	52	38 3/4"	70	52 1/4"	88	65 3/4"	106	79 1/4"	124	92 3/4"
17	12 1/2"	35	26"	53	39 1/2"	71	53"	89	66 1/2"	107	80"	125	93 1/2"
18	13 1/4"	36	26 3/4"	54	40 1/4"	72	53 3/4"	90	67 1/4"	108	80 3/4"	126	94 1/4"

GRILLES OF PERFORATED METAL

3/4" PLAIN LATTICE GRILLE

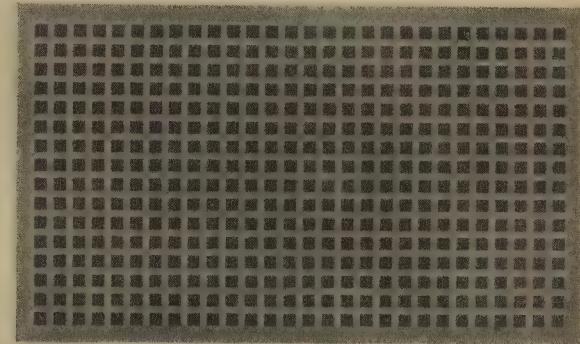


ACTUAL SIZE
3/4" HOLES, 1/4" BRIDGES.
57% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



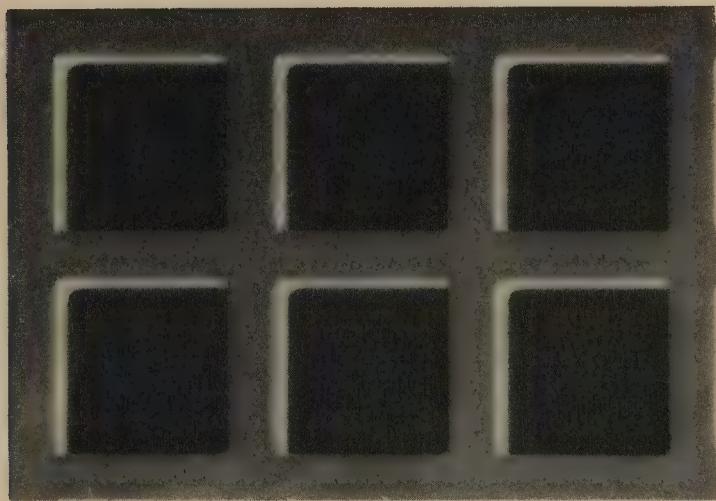
3/4" PLAIN LATTICE GRILLE
57% OPEN

TABLE OF OPENING SIZES

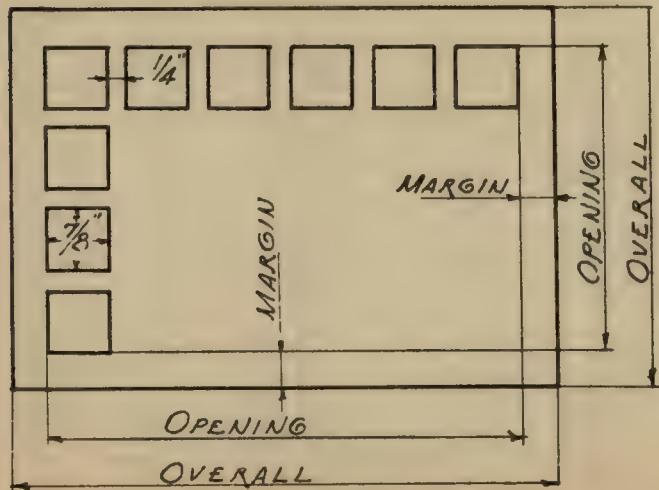
NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	3/4	16	15 3/4	31	30 3/4	46	45 3/4	61	60 3/4	76	75 3/4
2	1 3/4	17	16 3/4	32	31 3/4	47	46 3/4	62	61 3/4	77	76 3/4
3	2 3/4	18	17 3/4	33	32 3/4	48	47 3/4	63	62 3/4	78	77 3/4
4	3 3/4	19	18 3/4	34	33 3/4	49	48 3/4	64	63 3/4	79	78 3/4
5	4 3/4	20	19 3/4	35	34 3/4	50	49 3/4	65	64 3/4	80	79 3/4
6	5 3/4	21	20 3/4	36	35 3/4	51	50 3/4	66	65 3/4	81	80 3/4
7	6 3/4	22	21 3/4	37	36 3/4	52	51 3/4	67	66 3/4	82	81 3/4
8	7 3/4	23	22 3/4	38	37 3/4	53	52 3/4	68	67 3/4	83	82 3/4
9	8 3/4	24	23 3/4	39	38 3/4	54	53 3/4	69	68 3/4	84	83 3/4
10	9 3/4	25	24 3/4	40	39 3/4	55	54 3/4	70	69 3/4	85	84 3/4
11	10 3/4	26	25 3/4	41	40 3/4	56	55 3/4	71	70 3/4	86	85 3/4
12	11 3/4	27	26 3/4	42	41 3/4	57	56 3/4	72	71 3/4	87	86 3/4
13	12 3/4	28	27 3/4	43	42 3/4	58	57 3/4	73	72 3/4	88	87 3/4
14	13 3/4	29	28 3/4	44	43 3/4	59	58 3/4	74	73 3/4	89	88 3/4
15	14 3/4	30	29 3/4	45	44 3/4	60	59 3/4	75	74 3/4	90	89 3/4

THE HARRINGTON & KING PERFORATING CO.

7/8" PLAIN LATTICE GRILLE

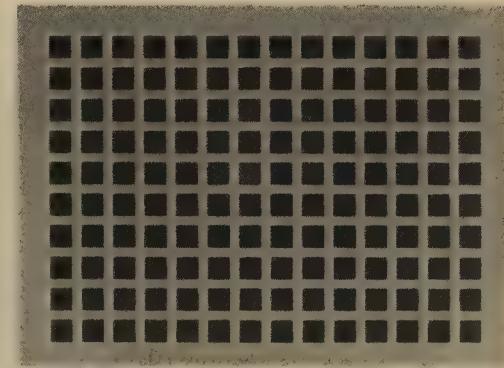


ACTUAL SIZE.
7/8" HOLES, 1/4" BRIDGES, 60% OPEN,



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



7/8" PLAIN LATTICE GRILLE
60% OPEN

TABLE OF OPENING SIZES

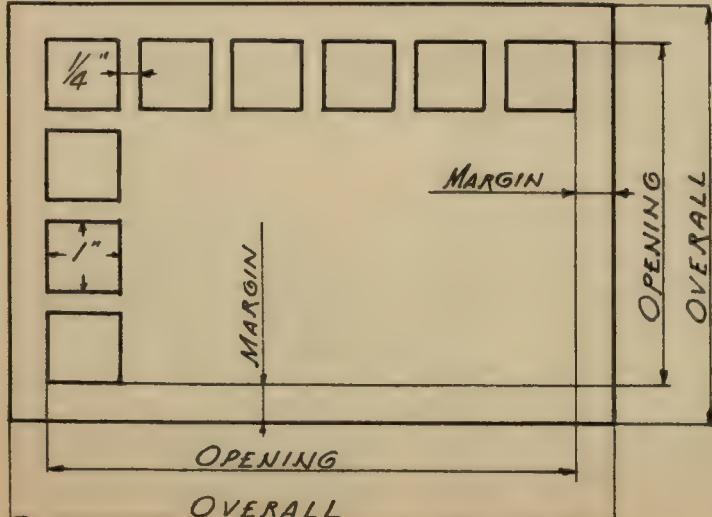
NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	7/8"	19	21 1/8	37	41 3/8	55	61 5/8	73	81 7/8	91	102 1/8
2	2"	20	22 1/4	38	42 1/2	56	62 3/4	74	83"	92	103 1/4
3	3 1/8"	21	23 3/8	39	43 5/8	57	63 7/8	75	84 1/8	93	104 3/8
4	4 1/4"	22	24 1/2	40	44 3/4	58	65"	76	85 1/4	94	105 1/2
5	5 3/8"	23	25 5/8	41	45 1/8	59	66 1/8	77	86 3/8	95	106 5/8
6	6 1/2"	24	26 3/4	42	47"	60	67 1/4	78	87 1/2	96	107 3/4
7	7 5/8"	25	27 7/8	43	48 1/8	61	68 5/8	79	88 5/8	97	108 7/8
8	8 3/4"	26	29"	44	49 1/4	62	69 1/2	80	89 3/4	98	110"
9	9 7/8"	27	30 1/8	45	50 3/8	63	70 5/8	81	90 7/8	99	111 1/8
10	11"	28	31 1/4	46	51 1/2	64	71 7/8	82	92"	100	112 1/4
11	12 1/8"	29	32 3/8	47	52 5/8	65	72 7/8	83	93 1/8	101	113 3/8
12	13 3/4"	30	33 1/2	48	53 3/4	66	74"	84	94 1/2	102	114 1/2
13	14 3/8"	31	34 5/8	49	54 1/8	67	75 1/8	85	95 1/8	103	115 5/8
14	15 1/2"	32	35 3/4	50	56"	68	76 1/4	86	96 1/2	104	116 3/4
15	16 5/8"	33	36 7/8	51	57 1/8	69	77 7/8	87	97 5/8	105	117 1/8
16	17 3/4"	34	38"	52	58 1/4	70	78 1/2	88	98 3/4	106	119"
17	18 7/8"	35	39 1/8	53	59 3/8	71	79 5/8	89	99 1/8	107	120 1/8
18	20	36	40 1/4	54	60 1/2	72	80 3/4	90	101"	108	121 1/4"

GRILLES OF PERFORATED METAL

1" PLAIN LATTICE GRILLE

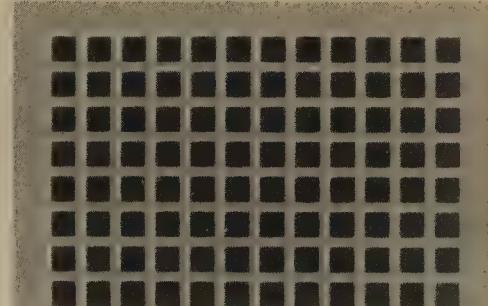


ACTUAL SIZE
1" HOLES $\frac{1}{4}$ " BRIDGES. 71% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



1" PLAIN LATTICE GRILLE
71% OPEN

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	1"	16	$19\frac{3}{4}$	31	$38\frac{1}{2}$	46	$57\frac{1}{4}$	61	76
2	$2\frac{1}{4}$ "	17	21 "	32	$39\frac{3}{4}$	47	$58\frac{1}{2}$	62	$77\frac{1}{4}$
3	$3\frac{1}{2}$ "	18	$22\frac{1}{4}$	33	41 "	48	$59\frac{3}{4}$	63	$78\frac{1}{2}$
4	$4\frac{3}{4}$ "	19	$23\frac{1}{2}$	34	$42\frac{1}{4}$	49	61 "	64	$79\frac{3}{4}$
5	6"	20	$24\frac{3}{4}$	35	$43\frac{1}{2}$	50	$62\frac{1}{4}$	65	81 "
6	$7\frac{1}{4}$ "	21	26 "	36	$44\frac{3}{4}$	51	$63\frac{1}{2}$	66	$82\frac{1}{4}$
7	$8\frac{1}{2}$ "	22	$27\frac{1}{4}$	37	46 "	52	$64\frac{3}{4}$	67	$83\frac{1}{2}$
8	$9\frac{3}{4}$ "	23	$28\frac{1}{2}$	38	$47\frac{1}{4}$	53	66 "	68	$84\frac{3}{4}$
9	11 "	24	$29\frac{3}{4}$	39	$48\frac{1}{2}$	54	$67\frac{1}{4}$	69	86 "
10	$12\frac{1}{4}$ "	25	31 "	40	$49\frac{3}{4}$	55	$68\frac{1}{2}$	70	$87\frac{1}{4}$
11	$13\frac{1}{2}$ "	26	$32\frac{1}{4}$	41	51 "	56	$69\frac{3}{4}$	71	$88\frac{1}{2}$
12	$14\frac{3}{4}$ "	27	$33\frac{1}{2}$	42	$52\frac{1}{4}$	57	71 "	72	$89\frac{3}{4}$
13	16"	28	$34\frac{3}{4}$	43	$53\frac{1}{2}$	58	$72\frac{1}{4}$	73	91 "
14	$17\frac{1}{4}$ "	29	36 "	44	$54\frac{3}{4}$	59	$73\frac{1}{2}$	74	$92\frac{1}{4}$
15	$18\frac{1}{2}$ "	30	$37\frac{1}{4}$ "	45	56 "	60	$74\frac{3}{4}$	75	$93\frac{1}{2}$
									90 " $112\frac{1}{4}$

THE HARRINGTON & KING PERFORATING CO.

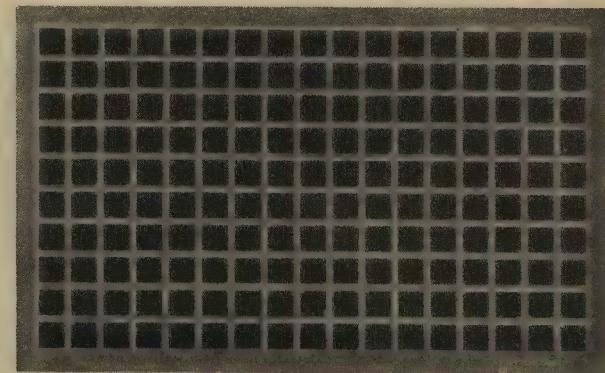
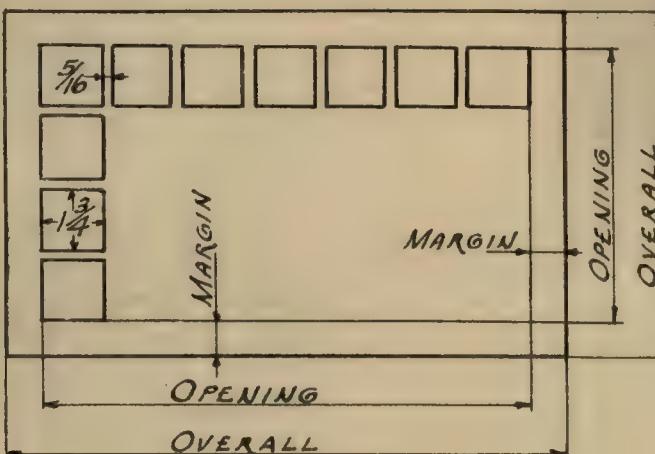
1 $\frac{3}{4}$ " PLAIN LATTICE GRILLE



ACTUAL SIZE
1 $\frac{3}{4}$ HOLES, $\frac{5}{16}$ BRIDGES, 72% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



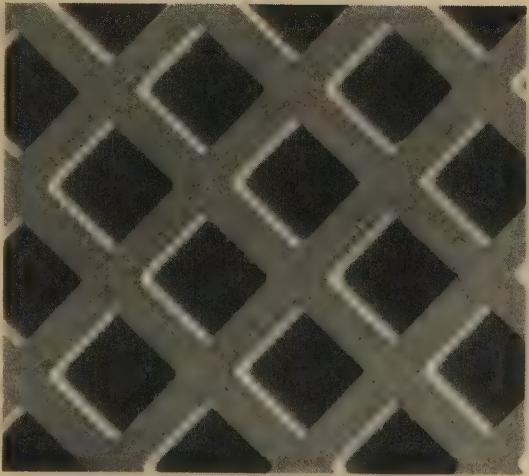
1 $\frac{3}{4}$ -PLAIN LATTICE, 72% OPEN

TABLE OF OPENING SIZES

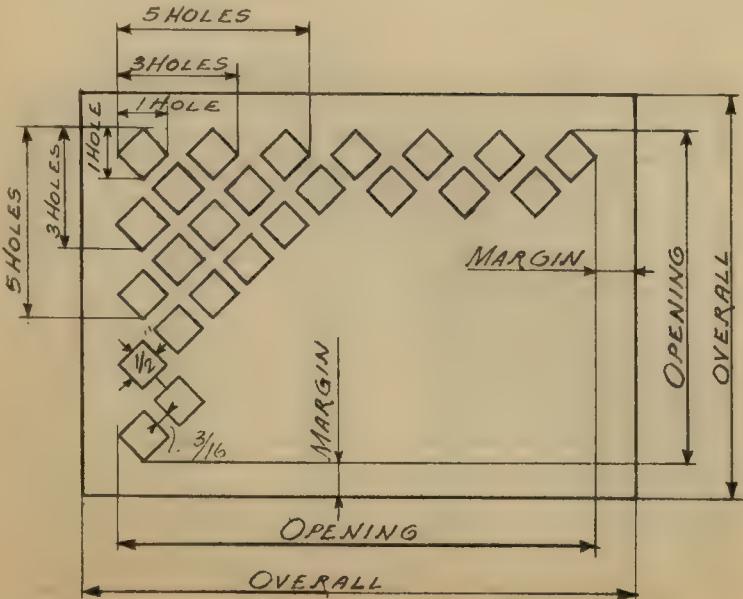
NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	1 $\frac{3}{4}$	8	16 $\frac{3}{16}$	15	30 $\frac{5}{8}$	22	45 $\frac{1}{16}$	29	59 $\frac{1}{2}$	36	73 $\frac{7}{16}$	43	88 $\frac{3}{8}$	50	102 $\frac{3}{16}$
2	3 $\frac{3}{16}$	9	18 $\frac{1}{4}$	16	32 $\frac{1}{16}$	23	47 $\frac{1}{8}$	30	61 $\frac{9}{16}$	37	76	44	90 $\frac{7}{16}$	51	104 $\frac{7}{8}$
3	5 $\frac{7}{8}$	10	20 $\frac{5}{16}$	17	34 $\frac{3}{4}$	24	49 $\frac{3}{16}$	31	63 $\frac{5}{8}$	38	78 $\frac{1}{16}$	45	92 $\frac{1}{2}$	52	106 $\frac{15}{16}$
4	7 $\frac{15}{16}$	11	22 $\frac{3}{8}$	18	36 $\frac{1}{16}$	25	51 $\frac{1}{4}$	32	65 $\frac{11}{16}$	39	80 $\frac{1}{8}$	46	94 $\frac{9}{16}$	53	109
5	10	12	24 $\frac{7}{16}$	19	38 $\frac{7}{8}$	26	53 $\frac{5}{16}$	33	67 $\frac{3}{4}$	40	82 $\frac{3}{16}$	47	96 $\frac{5}{8}$	54	111 $\frac{1}{16}$
6	12 $\frac{1}{16}$	13	26 $\frac{1}{2}$	20	40 $\frac{15}{16}$	27	55 $\frac{7}{8}$	34	69 $\frac{13}{16}$	41	84 $\frac{1}{4}$	48	98 $\frac{1}{16}$	55	113 $\frac{1}{8}$
7	14 $\frac{1}{8}$	14	28 $\frac{9}{16}$	21	43	28	57 $\frac{7}{16}$	35	71 $\frac{7}{8}$	42	86 $\frac{5}{16}$	49	100 $\frac{3}{4}$	56	115 $\frac{3}{16}$
															63 129 $\frac{5}{8}$

GRILLES OF PERFORATED METAL

1/2" DIAGONAL LATTICE GRILLE



ACTUAL SIZE
1/2" HOLES, 3/16" BRIDGES, 53% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

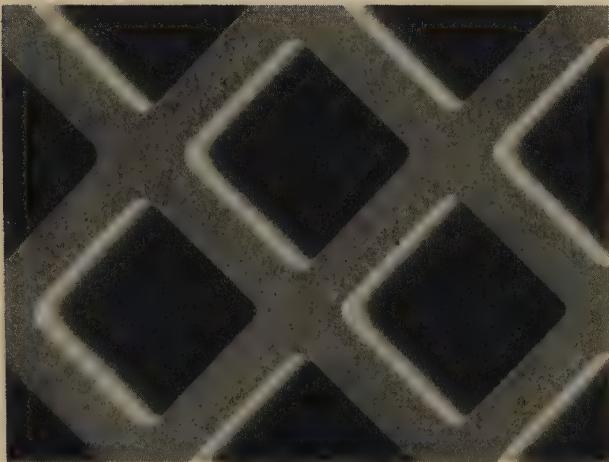


1/2" DIAGONAL LATTICE GRILLE
53% OPEN

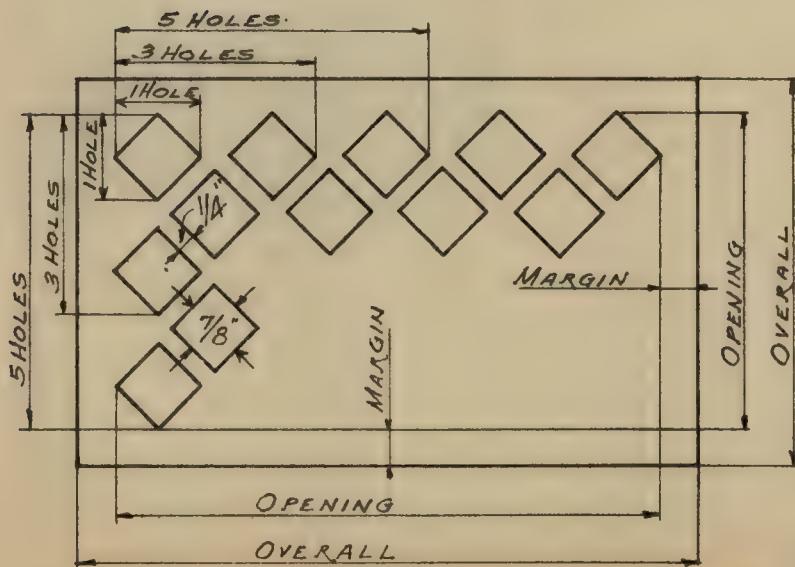
TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	1 1/16	23	11 1/16	45	22 1/16	67	33 1/16	89	44 1/16
3	1 1/16	25	12 1/16	47	23 1/16	69	34 1/16	91	45 1/16
5	2 1/16	27	13 1/16	49	24 1/16	71	35 1/16	93	46 1/16
7	3 1/16	29	14 1/16	51	25 1/16	73	36 1/16	95	47 1/16
9	4 1/16	31	15 1/16	53	26 1/16	75	37 1/16	97	48 1/16
11	5 1/16	33	16 1/16	55	27 1/16	77	38 1/16	99	49 1/16
13	6 1/16	35	17 1/16	57	28 1/16	79	39 1/16	101	50 1/16
15	7 1/16	37	18 1/16	59	29 1/16	81	40 1/16	103	51 1/16
17	8 1/16	39	19 1/16	61	30 1/16	83	41 1/16	105	52 1/16
19	9 1/16	41	20 1/16	63	31 1/16	85	42 1/16	107	53 1/16
21	10 1/16	43	21 1/16	65	32 1/16	87	43 1/16	109	54 1/16

7/8" DIAGONAL LATTICE GRILLE

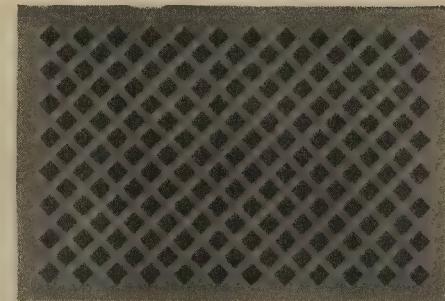


ACTUAL SIZE
7/8 HOLES, 1/4" BRIDGES
60% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



7/8 DIAGONAL LATTICE GRILLE



7/8 DIAGONAL-LATTICE GRILLE
PART HOLES, NOT FURNISHED
UNLESS SPECIFIED

TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	1 3/16"	27	22 5/16"	53	43 7/16"	79	64 9/16"	105	85 11/16"
3	2 1/16"	29	23 15/16"	55	45 9/16"	81	66 11/16"	107	87 5/16"
5	4 7/16"	31	25 5/16"	57	46 13/16"	83	67 15/16"	109	88 1/16"
7	6 1/16"	33	27 3/16"	59	48 1/16"	85	69 9/16"	111	90 9/16"
9	7 5/16"	35	28 1/16"	61	49 5/16"	87	71 1/16"	113	92 3/16"
11	9 5/16"	37	30 1/16"	63	51 1/16"	89	72 9/16"	115	93 13/16"
13	10 9/16"	39	32 1/16"	65	53 3/16"	91	74 5/16"	117	95 7/16"
15	12 9/16"	41	33 1/16"	67	54 1/16"	93	75 15/16"	119	97 1/16"
17	14 3/16"	43	35 5/16"	69	56 7/16"	95	77 9/16"	121	98 11/16"
19	15 13/16"	45	36 15/16"	71	58 1/16"	97	79 1/16"	123	100 5/16"
21	17 7/16"	47	38 9/16"	73	59 11/16"	99	80 1/16"	125	101 15/16"
23	19 11/16"	49	40 3/16"	75	61 5/16"	101	82 7/16"	127	103 9/16"
25	20 11/16"	51	41 13/16"	77	62 7/16"	103	84 1/16"	129	105 3/16"

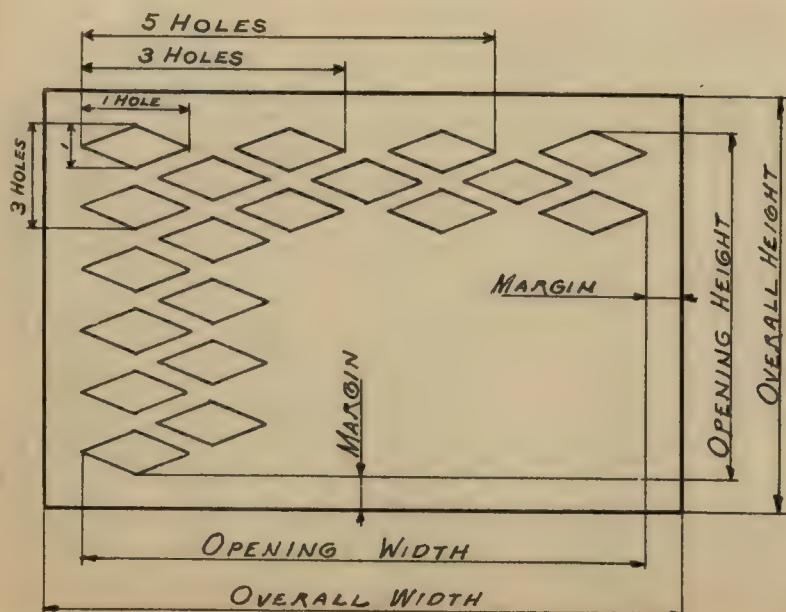
GRILLES OF PERFORATED METAL

STYLE - E - GRILLE

DIAMOND



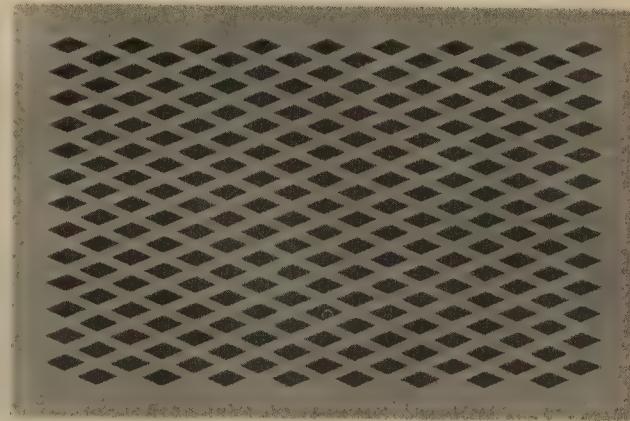
ACTUAL SIZE
STYLE - E - 52% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.

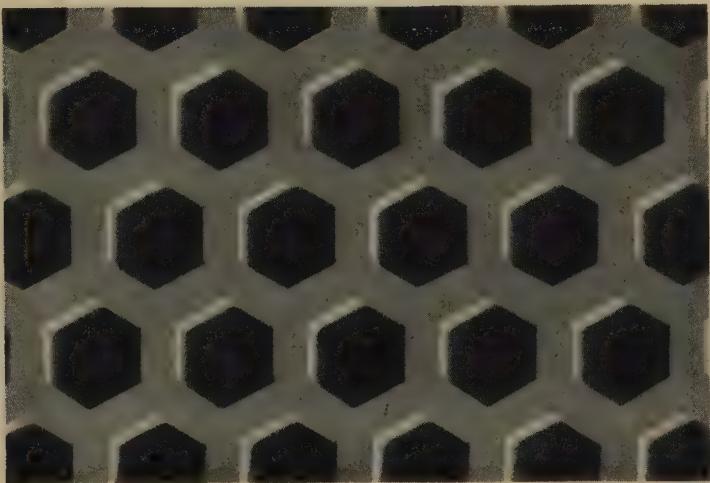


STYLE - E - 52% OPEN

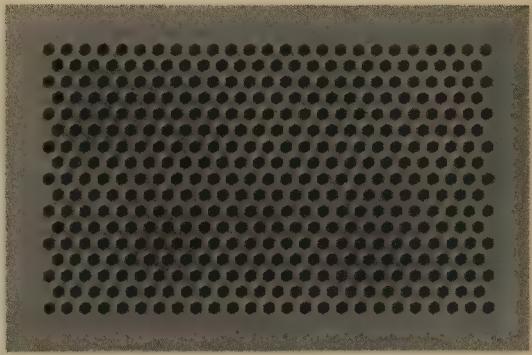
TABLE OF OPENING SIZES

No of Holes	OPENING		No of Holes	OPENING		No of Holes	OPENING		No of Holes	OPENING				
	Width	Height		Width	Height		Width	Height		Width	Height			
1	1 1/2"	5/8"	17	18 1/2"	7 5/8"	33	35 1/2"	14 5/8"	49	52 1/2"	21 7/8"	65	69 1/2"	26 5/8"
3	3 5/8"	1 1/2"	19	20 5/8"	8 1/2"	35	37 5/8"	15 1/2"	51	54 5/8"	22 1/2"	67	71 5/8"	24 1/2"
5	5 3/4"	2 3/8"	21	22 3/4"	9 3/8"	37	39 3/4"	16 3/8"	53	56 3/4"	23 3/8"	69	73 3/4"	30 3/8"
7	7 7/8"	3 1/4"	23	24 1/8"	10 1/4"	39	41 1/8"	17 1/4"	55	58 7/8"	24 1/4"	71	75 7/8"	31 1/4"
9	10"	4 1/8"	25	27"	11 1/8"	41	44"	18 1/8"	57	61"	25 1/8"	73	78"	32 1/8"
11	12 1/8"	5"	27	29 1/8"	12"	43	46 1/8"	19"	59	63 1/8"	26"	75	80 1/8"	33"
13	14 1/4"	5 7/8"	29	31 1/4"	12 7/8"	45	48 1/4"	19 7/8"	61	65 1/4"	26 7/8"	77	82 1/4"	33 7/8"
15	16 3/8"	6 3/4"	31	33 3/8"	13 3/4"	47	50 3/8"	20 3/4"	63	67 3/8"	27 3/4"	79	84 3/8"	34 3/4"

STYLE - B - GRILLE
HEXAGON



ACTUAL SIZE STYLE-B-
53% OPEN



STYLE-B 53% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.

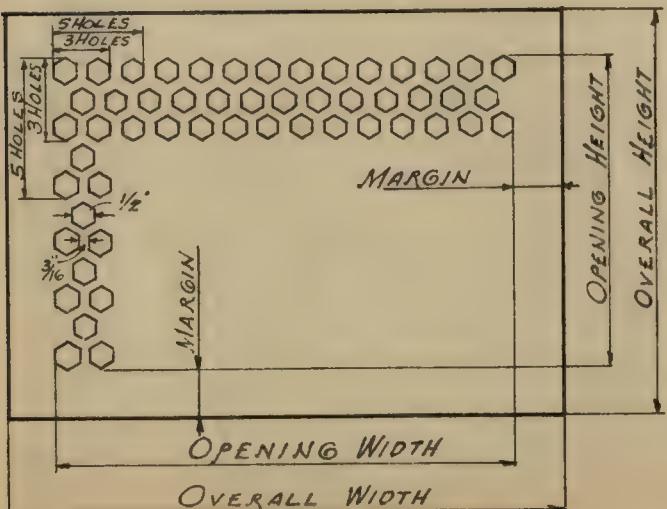
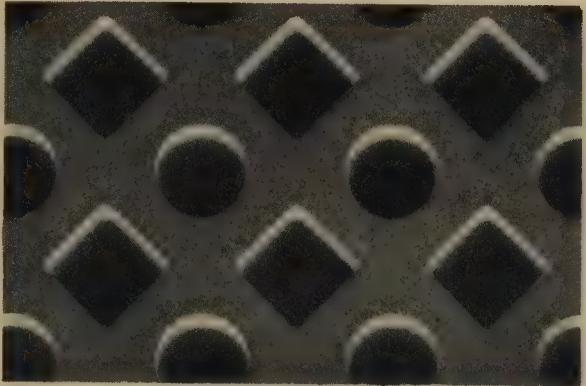


TABLE OF OPENING SIZES

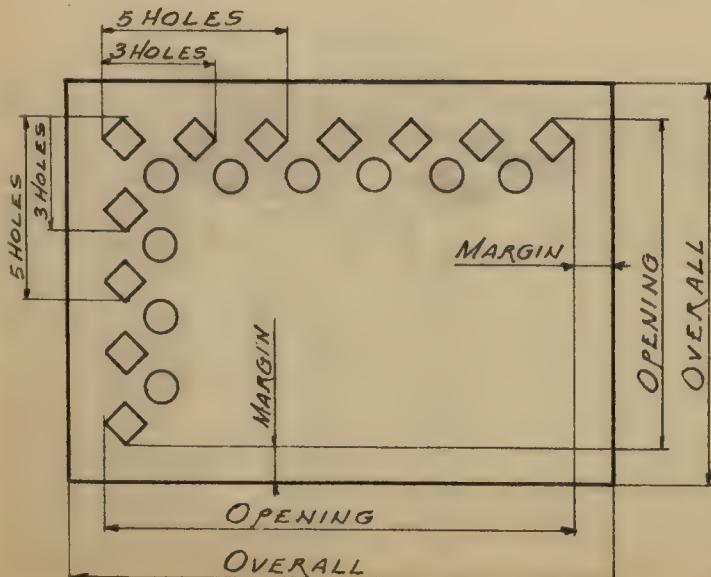
No of HOLES	OPENING		OPENING		OPENING		OPENING		OPENING		OPENING			
	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT				
3	1 3/16	1 3/16	33	11 1/2	20 1/16	63	21 1/16	39 5/16	93	32 1/8	58 1/16	123	42 1/16	76 3/16
5	1 7/8	3 1/16	35	12 3/16	21 13/16	65	22 1/16	40 9/16	95	32 13/16	59 5/16	125	43 1/8	78 1/16
7	2 9/16	4 5/16	37	12 7/8	23 1/16	67	23 3/16	41 1/16	97	33 1/2	60 9/16	127	43 1/16	79 5/16
9	3 1/4	5 9/16	39	13 9/16	24 5/16	69	23 7/8	43 1/16	99	34 3/16	61 1/16	129	44 1/2	80 9/16
11	3 15/16	6 13/16	41	14 1/4	25 5/16	71	24 1/16	44 5/16	101	34 7/8	63 1/16	131	45 3/16	81 3/16
13	4 5/8	8 1/16	43	14 15/16	26 3/16	73	25 1/4	45 9/16	103	35 9/16	64 5/16	133	45 1/8	83 1/16
15	5 5/16	9 5/16	45	15 5/8	28 1/16	75	25 5/16	46 3/16	105	36 1/2	65 9/16	135	46 1/16	84 5/16
17	6	10 9/16	47	16 5/16	29 5/16	77	26 5/8	48 1/16	107	36 15/16	66 1/16	137	47 1/4	85 9/16
19	6 1/16	11 3/16	49	17	30 9/16	79	27 5/16	49 5/16	109	37 5/8	68 1/16	139	47 5/16	86 3/16
21	7 3/8	13 1/16	51	17 11/16	31 13/16	81	28	50 9/16	111	38 5/16	69 5/16	141	48 7/8	88 1/16
23	8 1/16	14 5/16	53	18 3/8	33 1/16	83	28 1/16	51 3/16	113	39	70 9/16	143	49 5/16	89 5/16
25	8 3/4	15 9/16	55	19 11/16	34 5/16	85	29 3/8	53 1/16	115	39 11/16	71 13/16	145	50	90 9/16
27	9 7/16	16 13/16	57	19 9/4	35 9/16	87	30 1/16	54 5/16	117	40 3/8	73 1/16	147	50 1/16	91 3/16
29	10 1/8	18 1/16	59	20 1/16	36 13/16	89	30 3/4	55 1/16	119	41 1/16	74 5/16	149	51 3/8	93 1/16
31	10 13/16	19 5/16	61	21 1/8	38 1/16	91	31 1/16	56 5/16	121	41 3/4	75 9/16	151	52 1/16	94 5/16

GRILLES OF PERFORATED METAL

STYLE - G - GRILLE ROUND AND SQUARE HOLE DESIGN

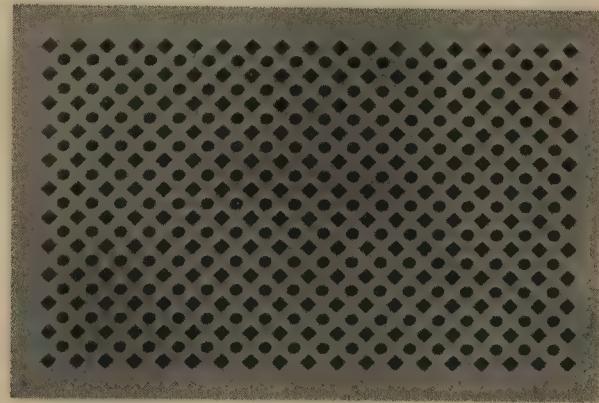


ACTUAL SIZE STYLE-G-
43% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

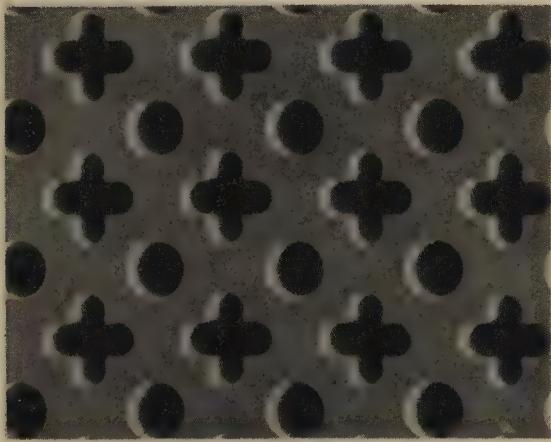


STYLE - G - 43% OPEN

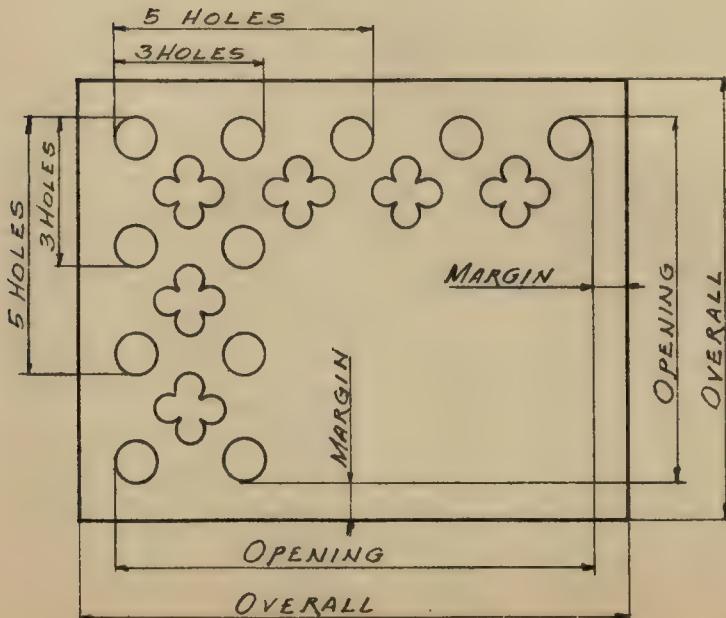
TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES		
3	1 5/8"	23	11 5/8"	43	21 5/8"	63	31 5/8"	83	41 5/8"	103	51 5/8"
5	2 5/8"	25	12 5/8"	45	22 5/8"	65	32 5/8"	85	42 5/8"	105	52 5/8"
7	3 5/8"	27	13 5/8"	47	23 5/8"	67	33 5/8"	87	43 5/8"	107	53 5/8"
9	4 5/8"	29	14 5/8"	49	24 5/8"	69	34 5/8"	89	44 5/8"	109	54 5/8"
11	5 5/8"	31	15 5/8"	51	25 5/8"	71	35 5/8"	91	45 5/8"	111	55 5/8"
13	6 5/8"	33	16 5/8"	53	26 5/8"	73	36 5/8"	93	46 5/8"	113	56 5/8"
15	7 5/8"	35	17 5/8"	55	27 5/8"	75	37 5/8"	95	47 5/8"	115	57 5/8"
17	8 5/8"	37	18 5/8"	57	28 5/8"	77	38 5/8"	97	48 5/8"	117	58 5/8"
19	9 5/8"	39	19 5/8"	59	29 5/8"	79	39 5/8"	99	49 5/8"	119	59 5/8"
21	10 5/8"	41	20 5/8"	61	30 5/8"	81	40 5/8"	101	50 5/8"	121	60 5/8"

STYLE - I GRILLE
CLOVERLEAF & ROUND



ACTUAL SIZE, STYLE - I
40% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,



STYLE - I: 40% OPEN

TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZE										
3	1 7/16"	27	10 1/16"	51	19 1/16"	75	28 1/16"	99	37 1/16"	123	46 1/16"
5	1 7/16"	29	10 13/16"	53	19 13/16"	77	28 13/16"	101	37 13/16"	125	46 13/16"
7	2 9/16"	31	11 9/16"	55	20 9/16"	79	29 9/16"	103	38 9/16"	127	47 9/16"
9	3 5/16"	33	12 5/16"	57	21 5/16"	81	30 5/16"	105	39 5/16"	129	48 5/16"
11	4 1/16"	35	13 1/16"	59	22 1/16"	83	31 1/16"	107	40 1/16"	131	49 1/16"
13	4 13/16"	37	13 13/16"	61	22 13/16"	85	31 13/16"	109	40 13/16"	133	49 13/16"
15	5 7/16"	39	14 7/16"	63	23 7/16"	87	32 7/16"	111	41 7/16"	135	50 7/16"
17	6 5/16"	41	15 5/16"	65	24 5/16"	89	33 5/16"	113	42 5/16"	137	51 5/16"
19	7 1/16"	43	16 1/16"	67	25 1/16"	91	34 1/16"	115	43 1/16"	139	52 1/16"
21	7 3/16"	45	16 13/16"	69	25 13/16"	93	34 13/16"	117	43 13/16"	141	52 13/16"
23	8 9/16"	47	17 9/16"	71	26 9/16"	95	35 9/16"	119	44 9/16"	143	53 9/16"
25	9 5/16"	49	18 5/16"	73	27 5/16"	97	36 5/16"	121	45 5/16"	145	54 5/16"

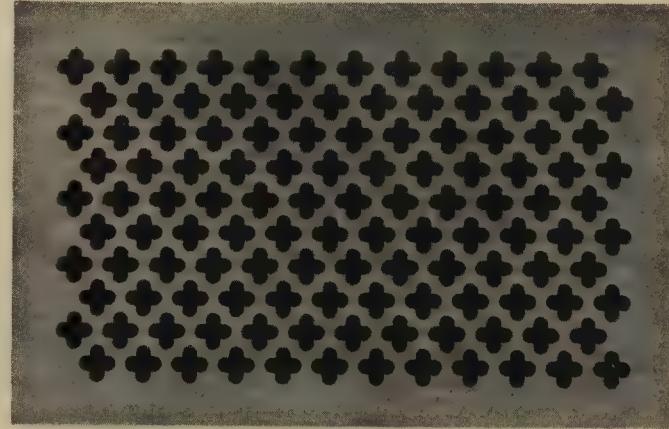
GRILLES OF PERFORATED METAL

STYLE-F- GRILLE CLOVER LEAF



ACTUAL STYLE-F-
45% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS
WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



STYLE-F- 45% OPEN

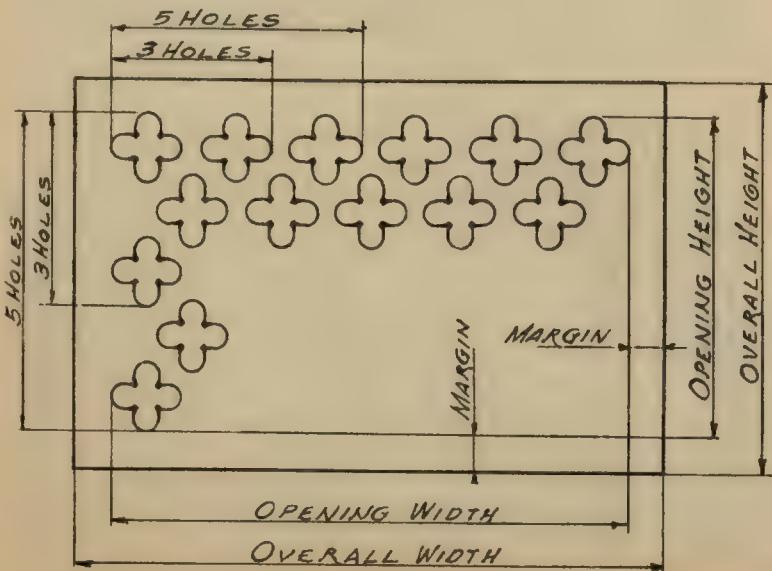


TABLE OF OPENING SIZES

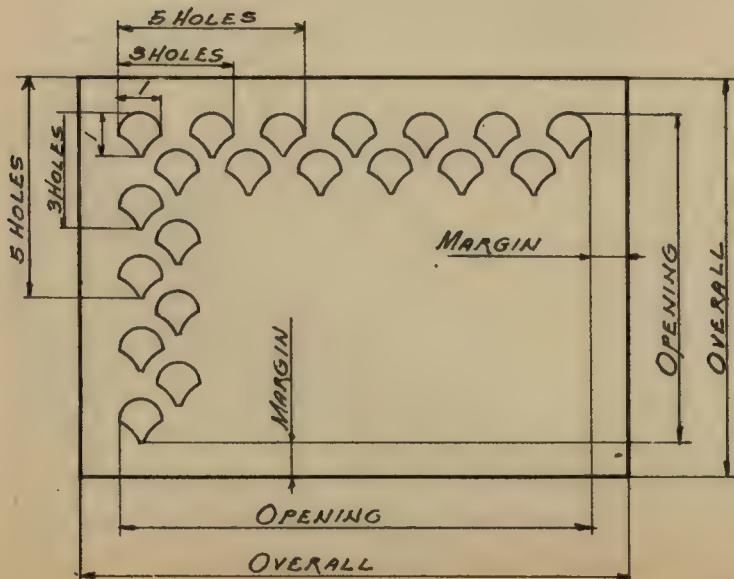
No. OF HOLES	OPENING SIZES										
	WIDTH	HEIGHT									
1	1"	1"	23	14 $\frac{3}{4}$	20 $\frac{1}{4}$	45	28 $\frac{1}{2}$	34 $\frac{1}{2}$	67	42 $\frac{1}{4}$	58 $\frac{3}{4}$
3	2 $\frac{1}{4}$	2 $\frac{3}{4}$	25	16"	22"	47	29 $\frac{3}{4}$	41 $\frac{1}{4}$	69	43 $\frac{1}{2}$	60 $\frac{1}{2}$
5	3 $\frac{1}{2}$	4 $\frac{1}{2}$	27	17 $\frac{1}{4}$	23 $\frac{3}{4}$	49	31"	43"	71	44 $\frac{3}{4}$	62 $\frac{1}{4}$
7	4 $\frac{3}{4}$	6 $\frac{1}{4}$	29	18 $\frac{1}{2}$	25 $\frac{1}{2}$	51	32 $\frac{1}{4}$	40 $\frac{3}{4}$	73	46"	64"
9	6"	8"	31	19 $\frac{1}{4}$	27 $\frac{1}{4}$	53	33 $\frac{1}{2}$	46 $\frac{1}{2}$	75	47 $\frac{1}{4}$	65 $\frac{3}{4}$
11	7 $\frac{1}{4}$	9 $\frac{3}{4}$	33	21"	29"	55	34 $\frac{3}{4}$	48 $\frac{1}{4}$	77	48 $\frac{1}{2}$	67 $\frac{1}{2}$
13	8 $\frac{1}{2}$	11 $\frac{1}{2}$	35	22 $\frac{1}{4}$	30 $\frac{3}{4}$	57	36"	50"	79	49 $\frac{3}{4}$	69 $\frac{1}{4}$
15	9 $\frac{3}{4}$	13 $\frac{1}{4}$	37	23 $\frac{1}{2}$	32 $\frac{1}{2}$	59	37 $\frac{1}{4}$	51 $\frac{1}{4}$	81	51"	71"
17	11"	15"	39	24 $\frac{3}{4}$	34 $\frac{1}{4}$	61	38 $\frac{1}{2}$	53 $\frac{1}{2}$	83	52 $\frac{1}{4}$	72 $\frac{3}{4}$
19	12 $\frac{1}{4}$	16 $\frac{3}{4}$	41	26"	36"	63	39 $\frac{3}{4}$	55 $\frac{1}{4}$	85	53 $\frac{1}{2}$	74 $\frac{1}{2}$
21	13 $\frac{1}{2}$	18 $\frac{1}{2}$	43	27 $\frac{1}{2}$	37 $\frac{3}{4}$	65	41"	57"	87	54 $\frac{3}{4}$	76 $\frac{1}{4}$
										109	68 $\frac{1}{2}$
											95 $\frac{1}{2}$

THE HARRINGTON & KING PERFORATING CO.

STYLED-HW-
SMALL FISH SCALE



ACTUAL SIZE STYLED H.W.
50% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



STYLED-H.W. 50% OPEN

TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	$\frac{5}{8}$	21	$10\frac{5}{8}$	41	$20\frac{5}{8}$	61	$30\frac{5}{8}$	81	$40\frac{5}{8}$
3	$1\frac{5}{8}$	23	$11\frac{5}{8}$	43	$21\frac{5}{8}$	63	$31\frac{5}{8}$	83	$41\frac{5}{8}$
5	$2\frac{5}{8}$	25	$12\frac{5}{8}$	45	$22\frac{5}{8}$	65	$32\frac{5}{8}$	85	$42\frac{5}{8}$
7	$3\frac{5}{8}$	27	$13\frac{5}{8}$	47	$23\frac{5}{8}$	67	$33\frac{5}{8}$	87	$43\frac{5}{8}$
9	$4\frac{5}{8}$	29	$14\frac{5}{8}$	49	$24\frac{5}{8}$	69	$34\frac{5}{8}$	89	$44\frac{5}{8}$
11	$5\frac{5}{8}$	31	$15\frac{5}{8}$	51	$25\frac{5}{8}$	71	$35\frac{5}{8}$	91	$45\frac{5}{8}$
13	$6\frac{5}{8}$	33	$16\frac{5}{8}$	53	$26\frac{5}{8}$	73	$36\frac{5}{8}$	93	$46\frac{5}{8}$
15	$7\frac{5}{8}$	35	$17\frac{5}{8}$	55	$27\frac{5}{8}$	75	$37\frac{5}{8}$	95	$47\frac{5}{8}$
17	$8\frac{5}{8}$	37	$18\frac{5}{8}$	57	$28\frac{5}{8}$	77	$38\frac{5}{8}$	97	$48\frac{5}{8}$
19	$9\frac{5}{8}$	39	$19\frac{5}{8}$	59	$29\frac{5}{8}$	79	$39\frac{5}{8}$	99	$49\frac{5}{8}$

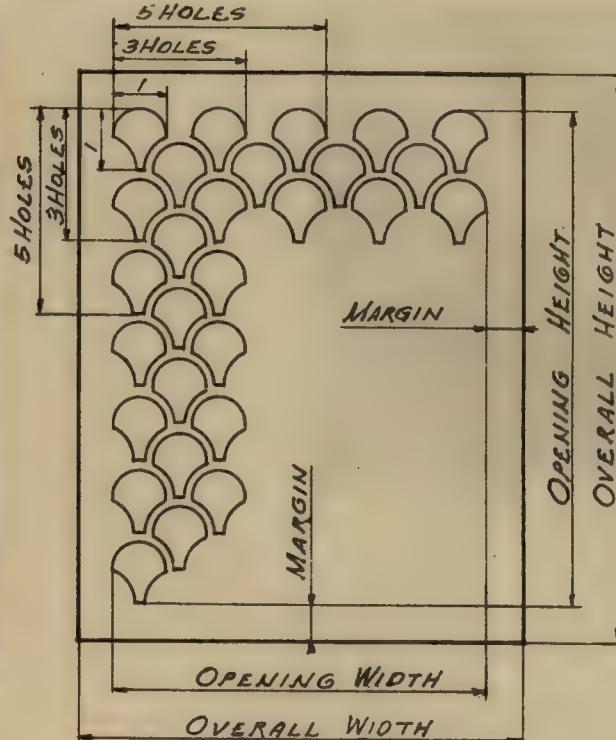
GRILLES OF PERFORATED METAL

STYLE - J. GRILLE

LARGE FISH SCALE



ACTUAL SIZE, STYLE - J-
65% OPEN



STYLE - J. GRILLE
65% OPEN

TABLE OF OPENING SIZES

No of Holes	OPENING		No of Holes	OPENING		No of Holes	OPENING		No of Holes	OPENING		No of Holes	OPENING	
	WIDTH	HEIGHT		WIDTH	HEIGHT		WIDTH	HEIGHT		WIDTH	HEIGHT		WIDTH	HEIGHT
1	1 1/2"	1 3/4"	15	17 1/4"	15 3/4"	29	33"	29 3/4"	43	48 3/4"	43 3/4"	57	64 1/2"	57 3/4"
3	3 3/4"	3 3/4"	17	19 1/2"	17 3/4"	31	35 1/4"	31 3/4"	45	51	45 3/4"	59	66 3/4"	59 3/4"
5	6"	5 3/4"	19	21 1/4"	19 3/4"	33	37 1/2"	33 3/4"	47	53 1/4"	47 3/4"	61	69"	61 1/4"
7	8 1/4"	7 3/4"	21	24"	21 1/2"	35	39 3/4"	35 3/4"	49	55 1/4"	49 3/4"	63	71 1/4"	63 3/4"
9	10 1/2"	9 3/4"	23	26 1/4"	23 3/4"	37	42"	37 3/4"	51	57 1/4"	51 3/4"	65	73 1/2"	65 3/4"
11	12 3/4"	11 3/4"	25	28 1/2"	25 3/4"	39	44 1/4"	39 3/4"	53	60	53 3/4"	67	75 3/4"	67 3/4"
13	15"	13 3/4"	27	30 3/4"	27 3/4"	41	46 1/2%"	41 3/4"	55	62 1/4"	55 1/4"	69	78"	69 3/4"

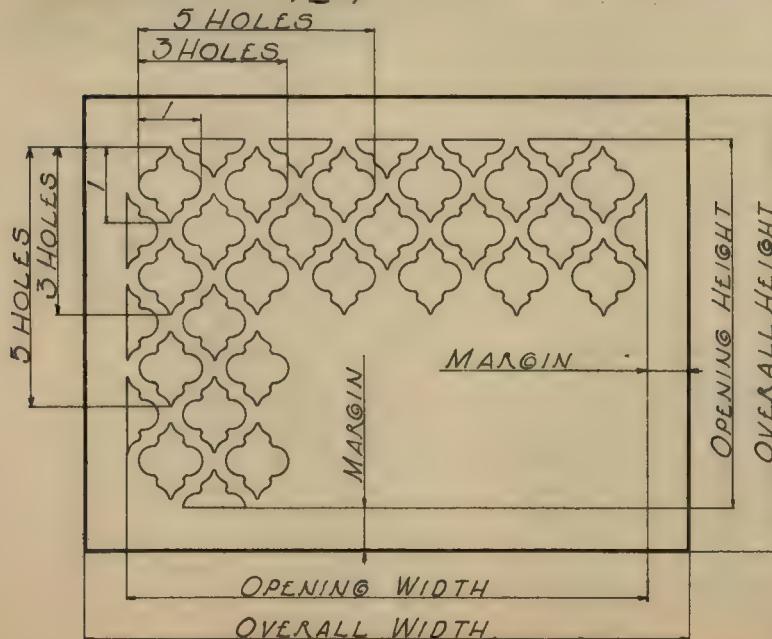
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT
WIDTH AND HEIGHT.

STYLE - C - GRILLE
GOTHIC DESIGN (LARGE)

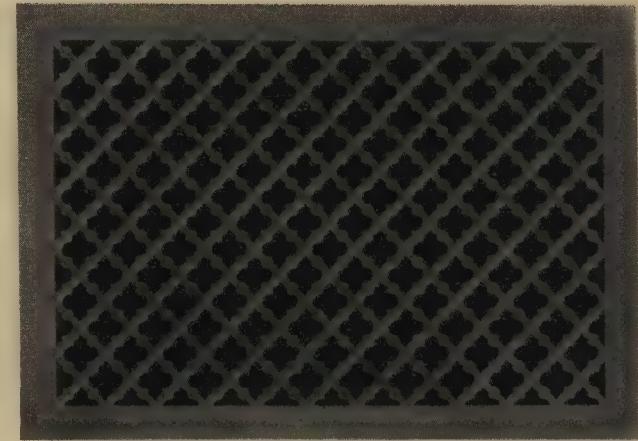


ACTUAL SIZE, STYLE-C-GRILLE
72% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



STYLE - C - GRILLE
72% OPEN

TABLE OF OPENING SIZES

NO. OF HOLES	OPENING WIDTH								
	HEIGHT								
1	1 1/2" 1 3/4"	21	21 1/2" 23"	41	41 1/2" 44 1/4"	61	61 1/2" 65 1/2"	81	81 1/2" 86 3/4"
3	3 1/2" 3 7/8"	23	23 1/2" 25 1/8"	43	43 1/2" 46 3/8"	63	63 1/2" 67 7/8"	83	83 1/2" 88 7/8"
5	5 1/2" 6"	25	25 1/2" 27 1/4"	45	45 1/2" 48 1/2"	65	65 1/2" 69 3/4"	85	85 1/2" 91"
7	7 1/2" 8 1/8"	27	27 1/2" 29 3/8"	47	47 1/2" 50 5/8"	67	67 1/2" 71 7/8"	87	87 1/2" 93 1/8"
9	9 1/2" 10 1/4"	29	29 1/2" 31 1/2"	49	49 1/2" 52 3/4"	69	69 1/2" 74"	89	89 1/2" 95 1/4"
11	11 1/2" 12 3/8"	31	31 1/2" 33 5/8"	51	51 1/2" 54 1/4"	71	71 1/2" 76 1/8"	91	91 1/2" 97 3/8"
13	13 1/2" 14 1/2"	33	33 1/2" 35 3/4"	53	53 1/2" 57"	73	73 1/2" 78 1/4"	93	93 1/2" 99 1/2"
15	15 1/2" 16 5/8"	35	35 1/2" 37 7/8"	55	55 1/2" 59 1/8"	75	75 1/2" 80 3/8"	95	95 1/2" 101 5/8"
17	17 1/2" 18 3/4"	37	37 1/2" 40"	57	57 1/2" 61 1/4"	77	77 1/2" 82 1/2"	97	97 1/2" 103 3/4"
19	19 1/2" 20 1/8"	39	39 1/2" 42 1/8"	59	59 1/2" 63 3/8"	79	79 1/2" 84 5/8"	99	99 1/2" 105 1/8"

GRILLES OF PERFORATED METAL

STYLE - Q - GRILLE DIVIDED FISH SCALE

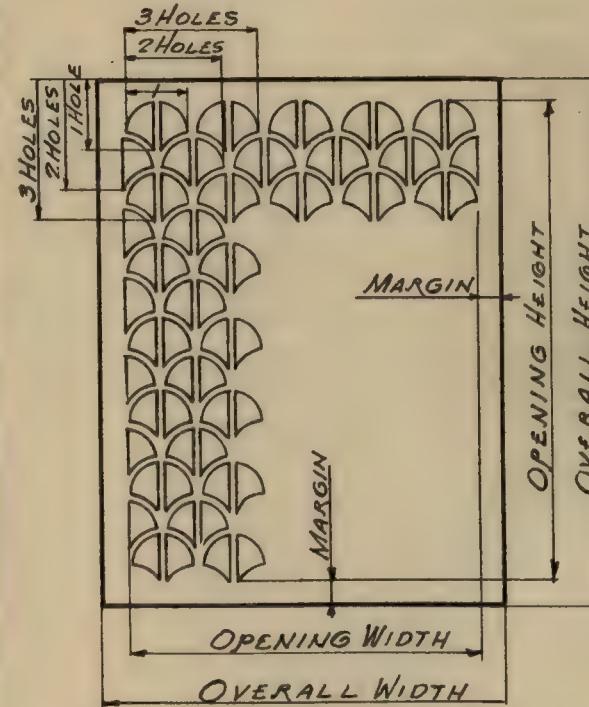


ACTUAL SIZE STYLE-Q-
65% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



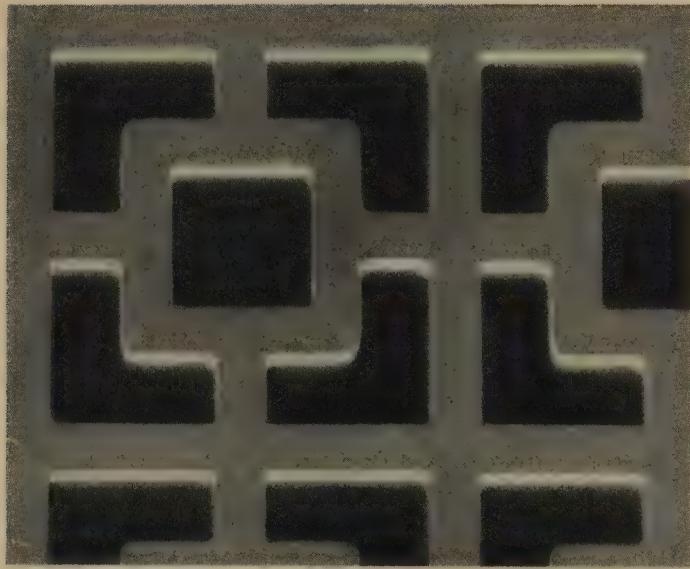
STYLE-Q
65% - OPEN

TABLE OF OPENING SIZES

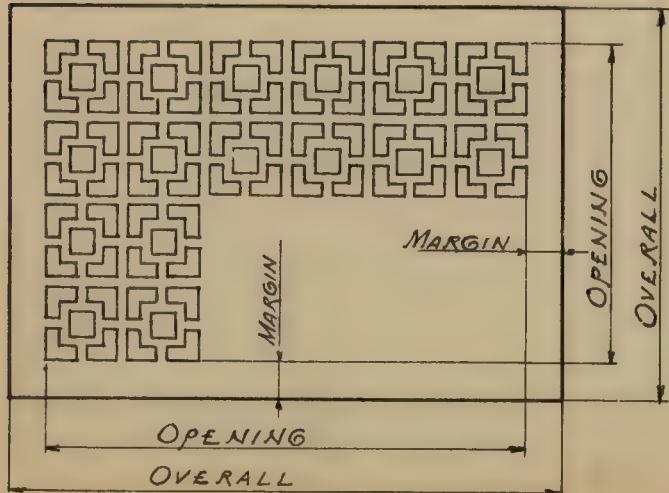
No. OF HOLES	OPENING														
	WIDTH	HEIGHT													
1	2 3/4	2"	11	17 3/4	17"	21	32 3/4	32"	31	47 3/4	47"	41	62 3/4	62"	
2	4 1/4	3 1/2	12	19 1/4	18 1/2	22	34 3/4	33 1/2	32	49 1/4	48 1/2	42	64 1/4	63 1/2	
3	5 3/4	5"	13	20 3/4	20"	23	35 3/4	35"	33	50 3/4	50"	43	65 3/4	65"	
4	7 1/4	6 1/2	14	22 1/2	21 1/2	24	37 1/2	36 1/2	34	52 1/2	51 1/2	44	67 1/2	66 1/2	
5	8 3/4	8"	15	23 3/4	23"	25	38 3/4	38"	35	53 3/4	53"	45	68 3/4	68"	
6	10 1/4	9 1/2	16	25 1/4	24 1/2	26	40 1/4	39 1/2	36	55 1/4	54 1/2	46	70 1/4	69 1/2	
7	11 3/4	11"	17	26 3/4	26"	27	41 3/4	41"	37	56 3/4	56"	47	71 3/4	71"	
8	13 1/4	12 1/2	18	28 1/4	27 1/2	28	43 1/4	42 1/2	38	58 1/4	57 1/2	48	73 1/4	72 1/2	
9	14 3/4	14"	19	29 3/4	29"	29	44 3/4	44"	39	59 3/4	59"	49	74 3/4	74"	
10	16 1/4	15 1/2	20	31 1/4	30 1/2	30	46 1/4	45 1/2	40	61 1/4	60 1/2	50	76 1/4	75 1/2	
													60	91 1/4	90 1/2
													70	106 1/4	105 1/2

THE HARRINGTON & KING PERFORATING CO.

STYLE-A-GRILLE
SQUARE LINK

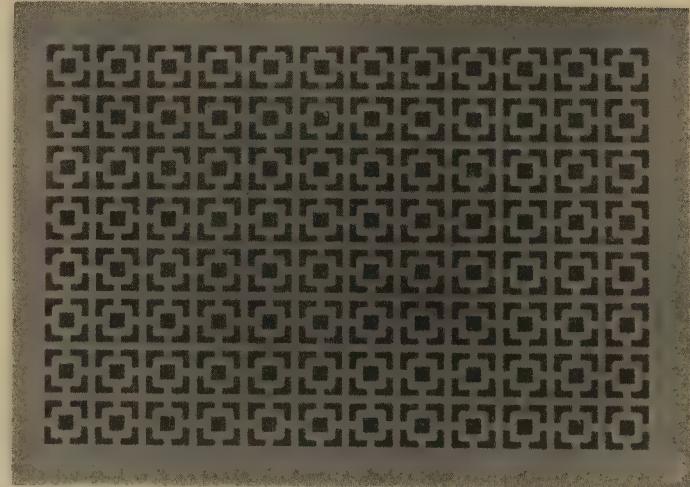


ACTUAL SIZE
STYLE-A-52% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



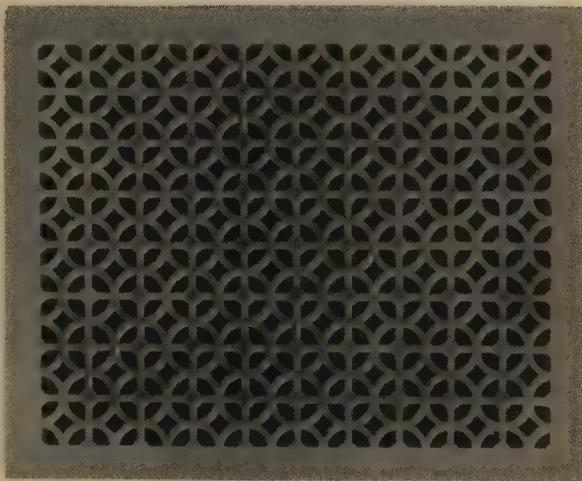
STYLE-A-GRILLE
52% OPEN

TABLE OF OPENING SIZES

No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES
1	2"	8	17 3/4"	15	33 1/2"	22	49 1/4"	29	65"	36	80 3/4"
2	4 1/4"	9	20"	16	35 3/4"	23	51 1/2"	30	67 1/4"	37	83"
3	6 1/2"	10	22 1/4"	17	38"	24	53 3/4"	31	69 1/2"	38	85 1/4"
4	8 3/4"	11	24 1/2"	18	40 1/4"	25	56"	32	71 3/4"	39	87 1/2"
5	11"	12	26 3/4"	19	42 1/2"	26	58 1/4"	33	74"	40	89 3/4"
6	13 1/4"	13	29"	20	44 1/4"	27	60 1/2"	34	76 1/4"	41	92"
7	15 1/2"	14	31 1/4"	21	47"	28	62 3/4"	35	78 1/2"	42	94 1/4"
										49	110"

GRILLES OF PERFORATED METAL

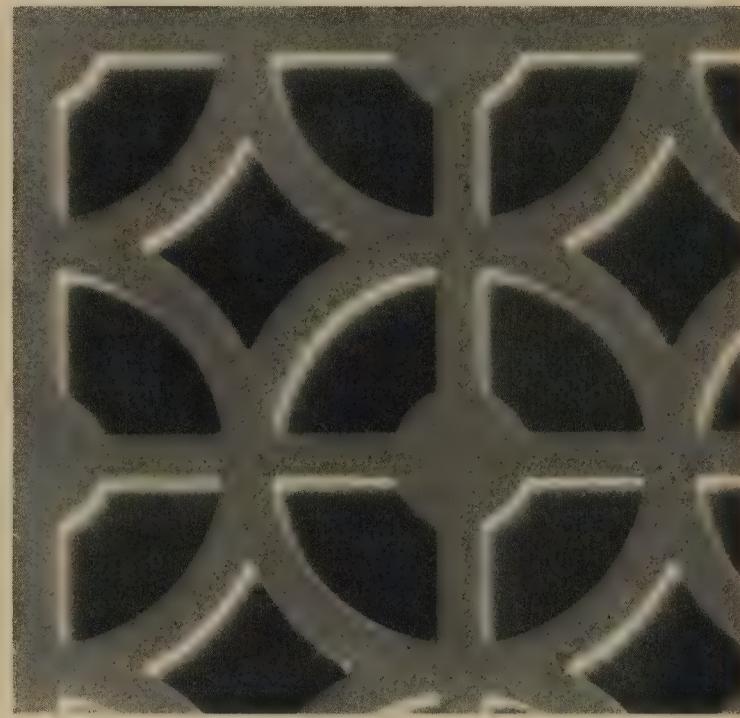
STYLE-M-GRILLE
WHEEL DESIGN



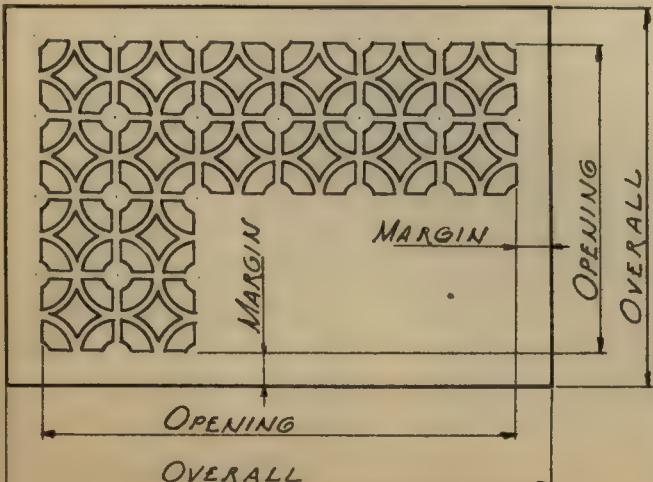
STYLE-M- 50% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



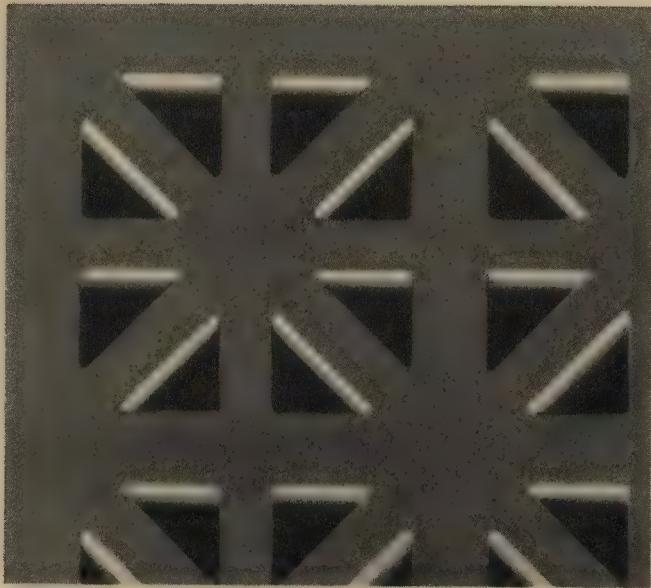
ACTUAL SIZE, STYLE-M- 50% OPEN



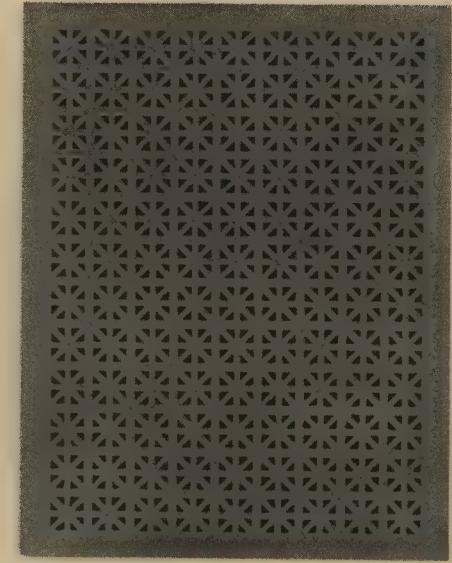
No. of Holes	Opening Sizes														
1	2"	7	15 1/2"	13	29"	19	42 1/2"	25	56"	31	69 1/2"	37	83"	43	96 1/2"
2	4 1/4"	8	17 3/4"	14	31 1/4"	20	44 3/4"	26	58 1/4"	32	71 3/4"	38	85 1/4"	44	98 3/4"
3	6 1/2"	9	20"	15	33 1/2"	21	47"	27	60 1/2"	33	74"	39	87 1/2"	45	101"
4	8 3/4"	10	22 1/4"	16	35 3/4"	22	49 1/4"	28	62 3/4"	34	76 1/4"	40	89 3/4"	46	103 1/4"
5	11"	11	24 1/2"	17	38"	23	51 1/2"	29	65"	35	78 1/2"	41	92"	47	105 1/2"
6	13 1/4"	12	26 3/4"	18	40 1/4"	24	53 3/4"	30	67 1/4"	36	80 3/4"	42	94 1/4"	48	107 3/4"

THE HARRINGTON & KING PERFORATING CO.

STYLE - L2 - GRILLE
UNION JACK DESIGN $1\frac{3}{4}$ " SIZE



ACTUAL SIZE STYLE - L2
28% OPEN



STYLE - L2-
28% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.

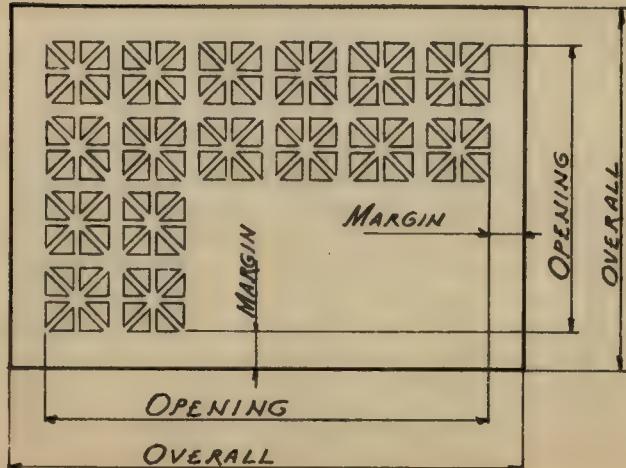


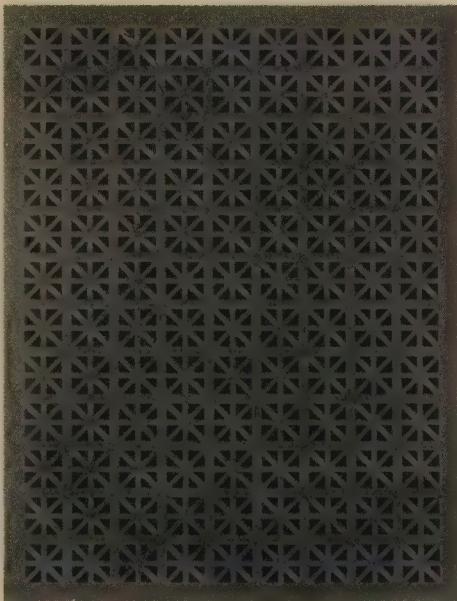
TABLE OF OPENING SIZES

NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES	NO OF HOLES	OPENING SIZES
1	$1\frac{3}{4}$ "	9	$18\frac{3}{4}$ "	17	$35\frac{3}{4}$ "	25	$52\frac{3}{4}$ "	33	$69\frac{3}{4}$ "	41	$86\frac{3}{4}$ "
2	$3\frac{7}{8}$ "	10	$20\frac{7}{8}$ "	18	$37\frac{7}{8}$ "	26	$54\frac{7}{8}$ "	34	$71\frac{7}{8}$ "	42	$88\frac{7}{8}$ "
3	6 "	11	23 "	19	40 "	27	57 "	35	74 "	43	91 "
4	$8\frac{1}{8}$ "	12	$25\frac{1}{8}$ "	20	$42\frac{1}{8}$ "	28	$59\frac{1}{8}$ "	36	$76\frac{1}{8}$ "	44	$93\frac{1}{8}$ "
5	$10\frac{1}{4}$ "	13	$27\frac{1}{4}$ "	21	$44\frac{1}{4}$ "	29	$61\frac{1}{4}$ "	37	$78\frac{1}{4}$ "	45	$95\frac{1}{4}$ "
6	$12\frac{3}{8}$ "	14	$29\frac{3}{8}$ "	22	$46\frac{3}{8}$ "	30	$63\frac{3}{8}$ "	38	$80\frac{3}{8}$ "	46	$97\frac{3}{8}$ "
7	$14\frac{1}{2}$ "	15	$31\frac{1}{2}$ "	23	$48\frac{1}{2}$ "	31	$65\frac{1}{2}$ "	39	$82\frac{1}{2}$ "	47	$99\frac{1}{2}$ "
8	$16\frac{5}{8}$ "	16	$33\frac{5}{8}$ "	24	$50\frac{5}{8}$ "	32	$67\frac{5}{8}$ "	40	$84\frac{5}{8}$ "	48	$101\frac{5}{8}$ "
											$118\frac{5}{8}$ "

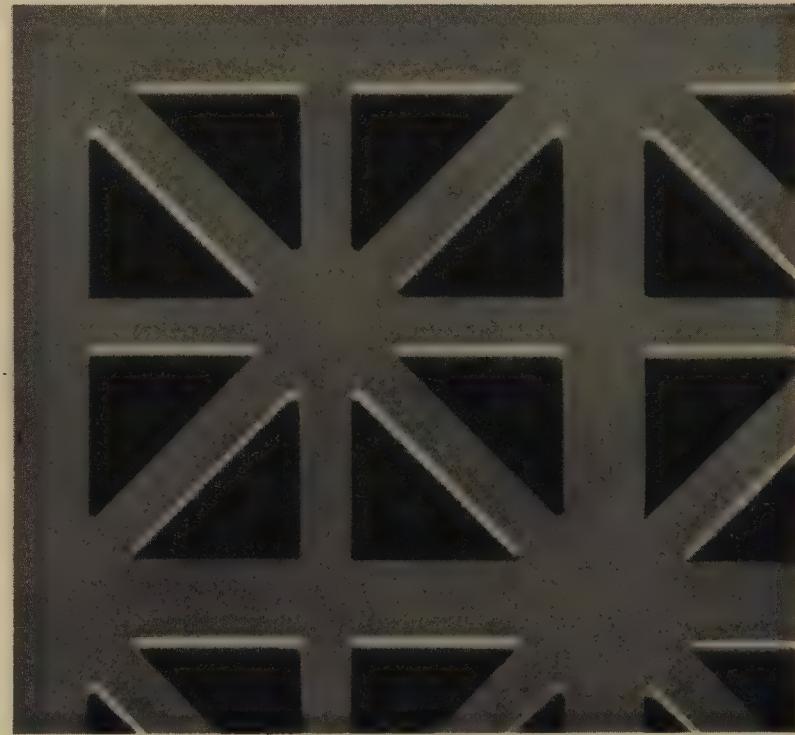
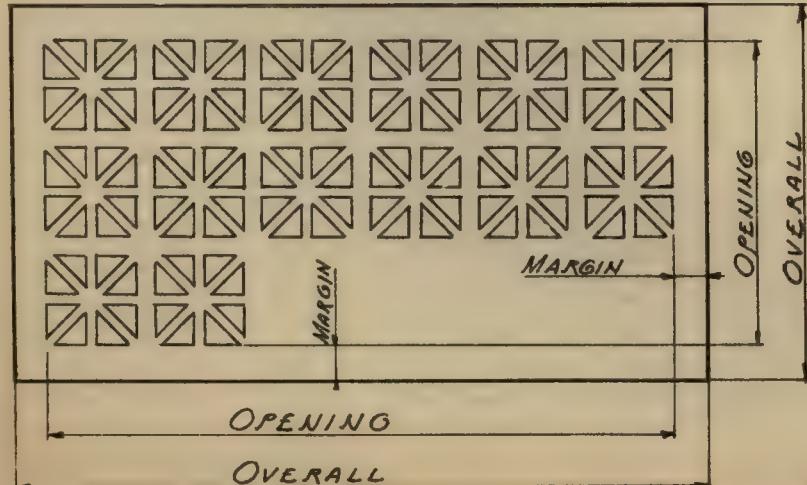
GRILLES OF PERFORATED METAL

STYLE - L - GRILLE

UNION JACK DESIGN 2½" SIZE



STYLE - L
39% OPEN



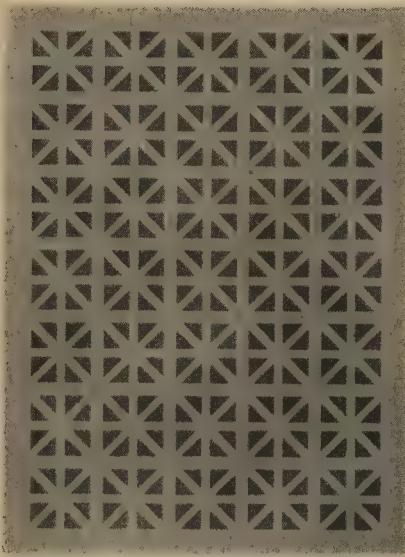
ACTUAL SIZE STYLE - L
39% OPEN

TABLE OF OPENING SIZES

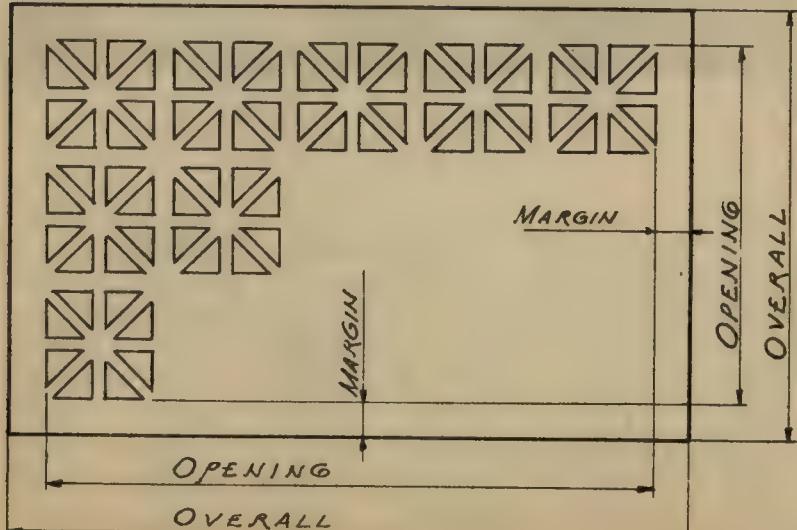
No. of Holes	Opening Sizes	No. of Holes	Opening Sizes	No. of Holes	Opening Sizes	No. of Holes	Opening Sizes	No. of Holes	Opening Sizes		
1	2½"	7	20½"	13	38½"	19	56½"	25	74½"	31	92½"
2	5½"	8	23½"	14	41½"	20	59½"	26	77½"	32	95½"
3	8½"	9	26½"	15	44½"	21	62½"	27	80½"	33	98½"
4	11½"	10	29½"	16	47½"	22	65½"	28	83½"	34	101½"
5	14½"	11	32½"	17	50½"	23	68½"	29	86½"	35	104½"
6	17½"	12	35½"	18	53½"	24	71½"	30	89½"	36	107½"

THE HARRINGTON & KING PERFORATING CO.

STYLE-L3-GRILLE
UNION JACK DESIGN - 3" SIZE



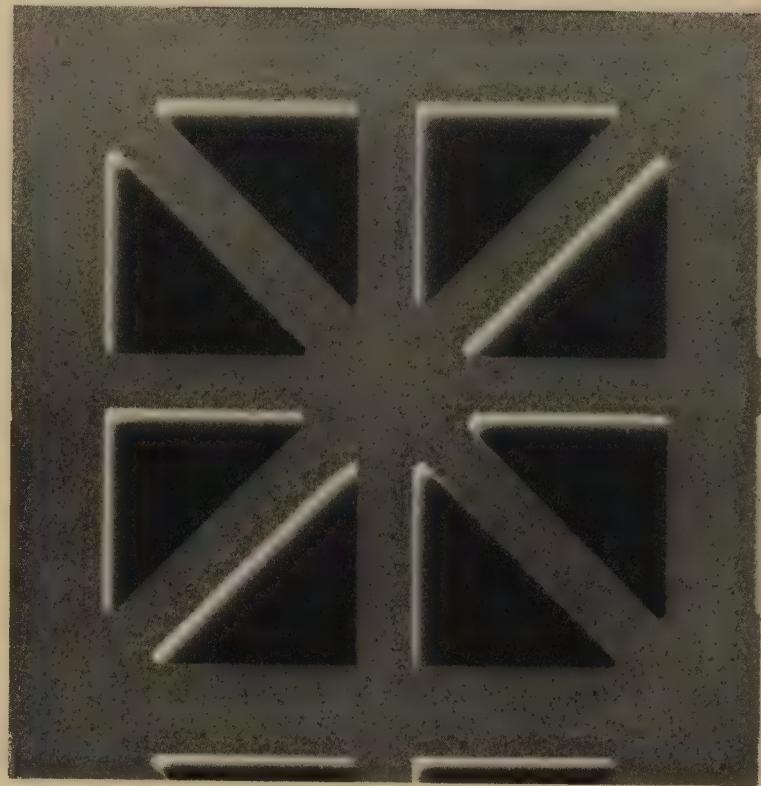
STYLE-L3
42% OPEN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.

KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH.



ACTUAL SIZE-STYLE-L3
42% OPEN

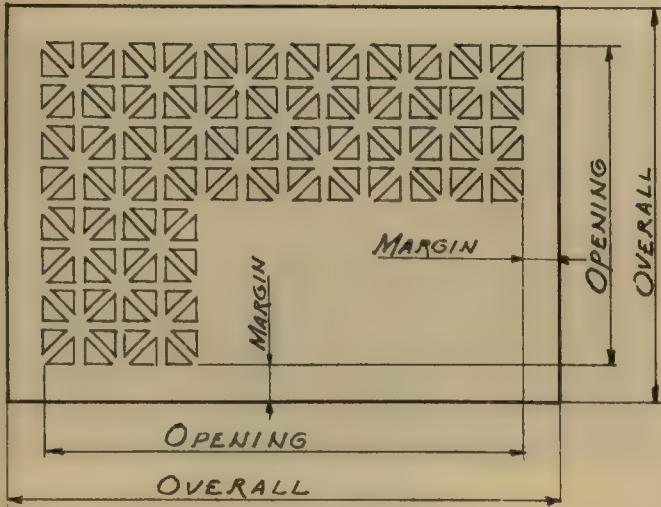
TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES	NO. OF HOLES	OPENING SIZES
1	3"	7	24"	13	45"	19	66"	25	87"	31	108"
2	6 1/2"	8	27 1/2"	14	48 1/2"	20	69 1/2"	26	90 1/2"	32	111 1/2"
3	10"	9	31"	15	52"	21	73"	27	94"	33	115"
4	13 1/2"	10	34 1/2"	16	55 1/2"	22	76 1/2"	28	97 1/2"	34	118 1/2"
5	17"	11	38"	17	59"	23	80"	29	101"	35	122"
6	20 1/2"	12	41 1/2"	18	62 1/2"	24	83 1/2"	30	104 1/2"	36	125 1/2"

GRILLES OF PERFORATED METAL

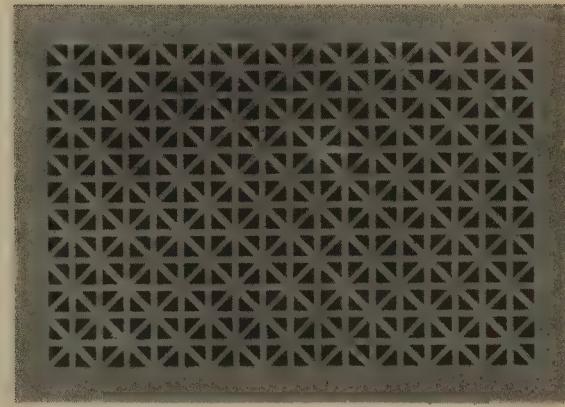
STYLE - LX - GRILLES

GRECIAN DESIGN



NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL.
MINIMUM MARGINS.
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



STYLE - LX - GRILLE

FOR LX2 32% OPEN
FOR ACTUAL SIZE OF UNIT SEE PAGE 28

No. OF HOLES	OPENING SIZES						
1	1 3/4"	13	25 3/4	25	49 3/4"	37	73 3/4"
2	3 3/4"	14	27 3/4	26	51 3/4"	38	75 3/4"
3	5 3/4"	15	29 3/4	27	53 3/4"	39	77 3/4"
4	7 3/4"	16	31 3/4	28	55 3/4"	40	79 3/4"
5	9 3/4"	17	33 3/4	29	57 3/4"	41	81 3/4"
6	11 3/4"	18	35 3/4	30	59 3/4"	42	83 3/4"
7	13 3/4"	19	37 3/4	31	61 3/4"	43	85 3/4"
8	15 3/4"	20	39 3/4	32	63 3/4"	44	87 3/4"
9	17 3/4"	21	41 3/4	33	65 3/4"	45	89 3/4"
10	19 3/4"	22	43 3/4	34	67 3/4"	46	91 3/4"
11	21 3/4"	23	45 3/4	35	69 3/4"	47	93 3/4"
12	23 3/4"	24	47 3/4	36	71 3/4"	48	95 3/4"

TABLES OF OPENING SIZES

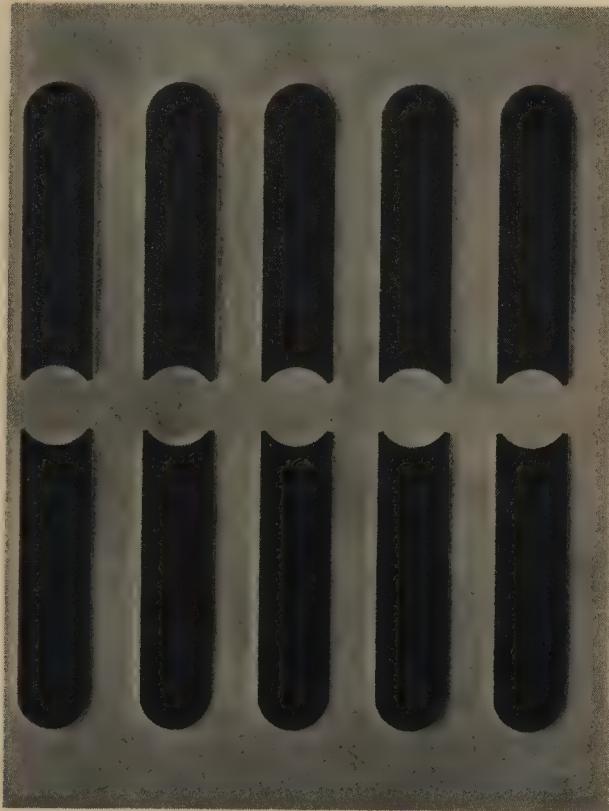
FOR LX - 46% OPEN
FOR ACTUAL SIZE OF UNIT SEE PAGE 29.

No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES
1	2 1/2"	13	35 1/2"	25	68 1/2"
2	5 1/4"	14	38 1/4"	26	71 1/4"
3	8 "	15	41 "	27	74 "
4	10 3/4"	16	43 3/4"	28	76 3/4"
5	13 1/2"	17	46 1/2"	29	79 1/2"
6	16 1/4"	18	49 1/4"	30	82 1/4"
7	19 "	19	52 "	31	85 "
8	21 3/4"	20	54 3/4"	32	87 3/4"
9	24 1/2"	21	57 1/2"	33	90 1/2"
10	27 1/4"	22	60 1/4"	34	93 1/4"
11	30 "	23	63 "	35	96 "
12	32 3/4"	24	65 3/4"	36	98 3/4"

FOR LX3 - 46% OPEN
FOR ACTUAL SIZE OF UNIT SEE PAGE 30

No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES	No. OF HOLES	OPENING SIZES
1	3"	13	42 3/4"	25	82 1/2"
2	6 5/16"	14	46 1/16"	26	85 5/16"
3	9 5/8"	15	49 3/8"	27	89 1/8"
4	12 15/16"	16	52 11/16"	28	92 7/16"
5	16 1/4"	17	56 "	29	95 3/4"
6	19 9/16"	18	59 5/16"	30	99 1/16"
7	22 7/8"	19	62 5/8"	31	102 3/8"
8	26 3/16"	20	65 15/16"	32	105 11/16"
9	29 1/2"	21	69 1/4"	33	109 "
10	32 13/16"	22	72 9/16"	34	112 5/16"
11	36 1/8"	23	75 7/8"	35	115 5/8"
12	39 7/16"	24	79 3/16"	36	118 9/16"

STYLE - S
VERTICAL SLOTS



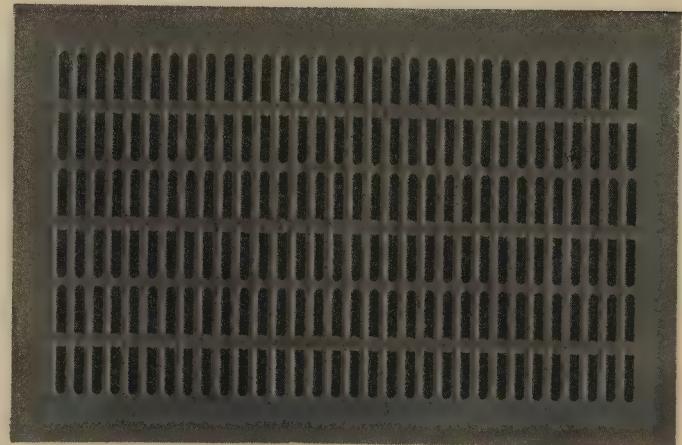
ACTUAL SIZE STYLE S

STYLE S - 50%



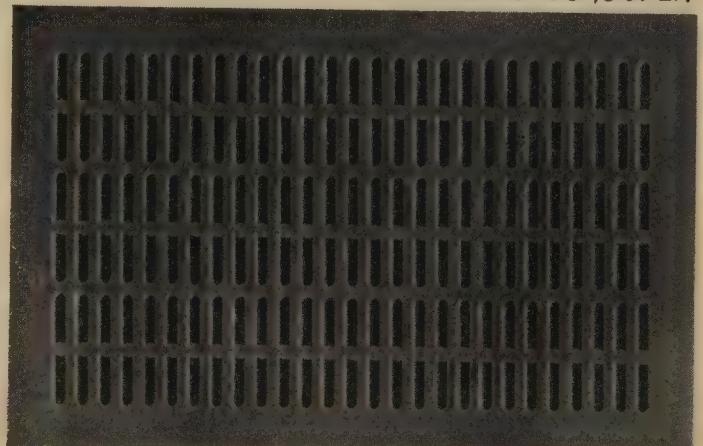
NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT,
WIDTH AND HEIGHT.



STYLE S-CLOSE SPACING 56% OPEN

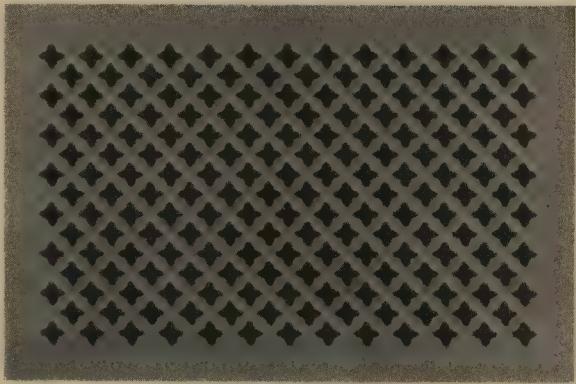
STYLE S-NORMAL SPACING 50% OPEN



GRILLES OF PERFORATED METAL

STYLE-V GRILLE

GOTHIC DESIGN (SMALL)



STYLE - V GRILLE
54% OPEN

NOTE
OPENING SIZES MUST CORRESPOND
WITH TABLE BUT WIDTH OF MARGINS
MAY BE VARIED TO OBTAIN CORRECT
OVERALL DIMENSIONS.

WHEN ORDERING SPECIFY:
DIMENSIONS, OPENING OR OVERALL,
MINIMUM MARGINS,
KIND OF METAL AND GAUGE,
IF SCREW HOLES ARE WANTED,
KIND OF FINISH,
WHICH DIMENSIONS REPRESENT
WIDTH AND HEIGHT.



ACTUAL SIZE - STYLE-V.
54% OPEN

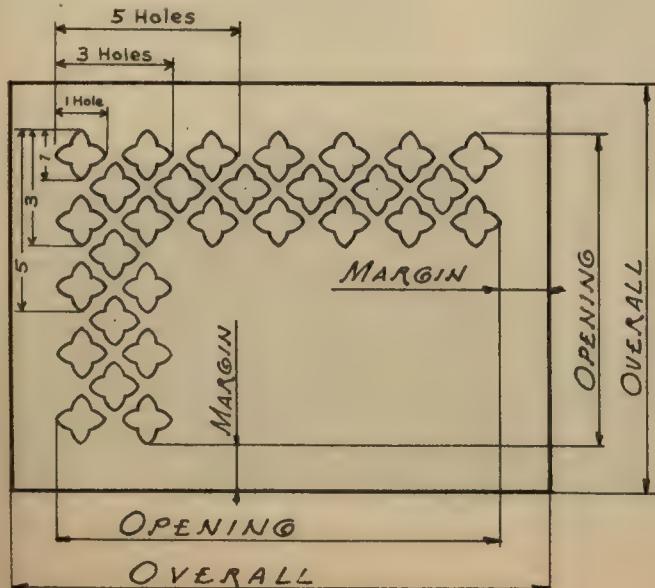
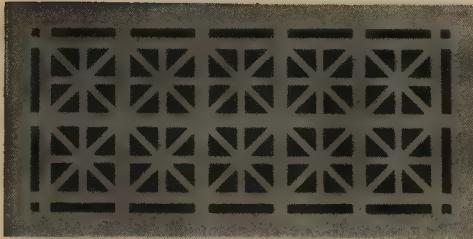


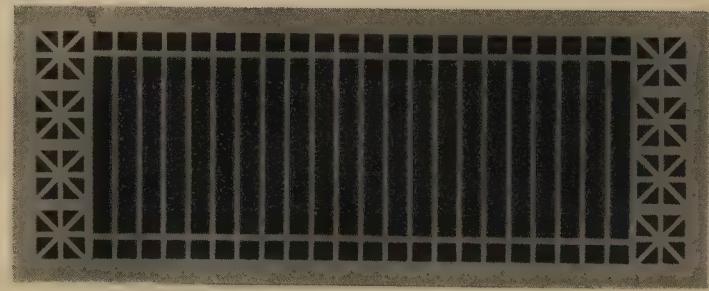
TABLE OF OPENING SIZES

NO. OF HOLES	OPENING SIZE														
1	1"	17	12"	33	23"	49	34"	65	45"	81	56"	97	67"	113	78"
3	2 3/8"	19	13 3/8"	35	24 3/8"	51	35 3/8"	67	46 3/8"	83	57 3/8"	99	68 3/8"	115	79 3/8"
5	3 3/4"	21	14 3/4"	37	25 3/4"	53	36 3/4"	69	47 3/4"	85	58 3/4"	101	69 3/4"	117	80 3/4"
7	5 1/8"	23	16 1/8"	39	27 1/8"	55	38 1/8"	71	49 1/8"	87	60 1/8"	103	71 1/8"	119	82 1/8"
9	6 1/2"	25	17 1/2"	41	28 1/2"	57	39 1/2"	73	50 1/2"	89	61 1/2"	105	72 1/2"	121	83 1/2"
11	7 1/8"	27	18 1/8"	43	29 1/8"	59	40 1/8"	75	51 1/8"	91	62 1/8"	107	73 1/8"	123	84 1/8"
13	9 1/4"	29	20 1/4"	45	31 1/4"	61	42 1/4"	77	53 1/4"	93	64 1/4"	109	75 1/4"	125	86 1/4"
15	10 5/8"	31	21 5/8"	47	32 5/8"	63	43 5/8"	79	54 5/8"	95	65 5/8"	111	76 5/8"	127	87 5/8"

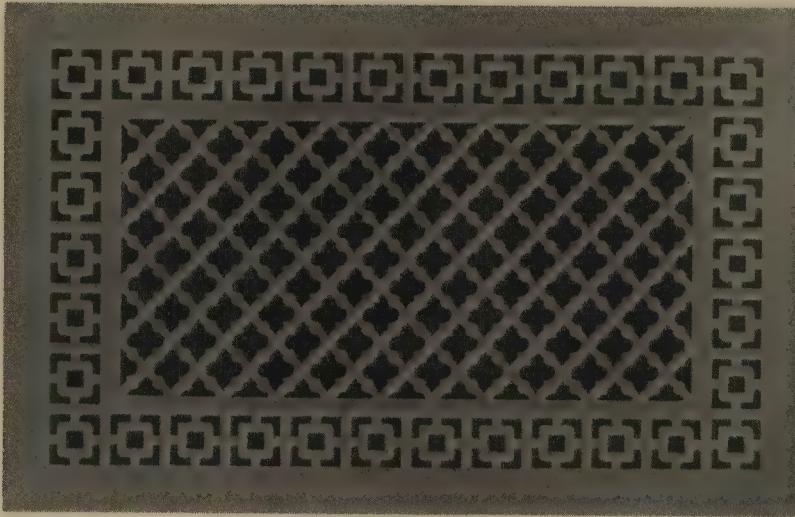
Grilles with Border Design



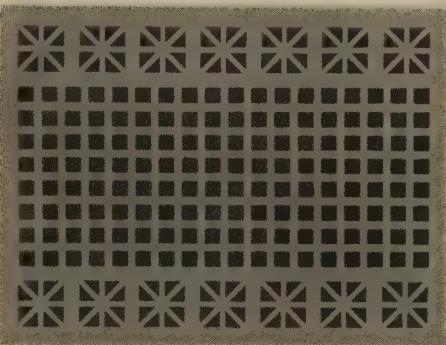
Style NL-45% Open



Style LT-71% Open

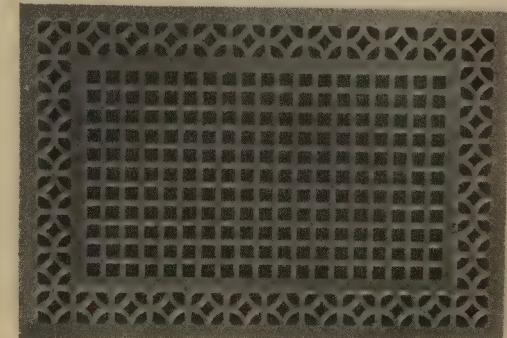


Style AC-60% Open



Style LK-45% Open

Designs with borders are much less expensive than similar designs in cast iron or bronze.



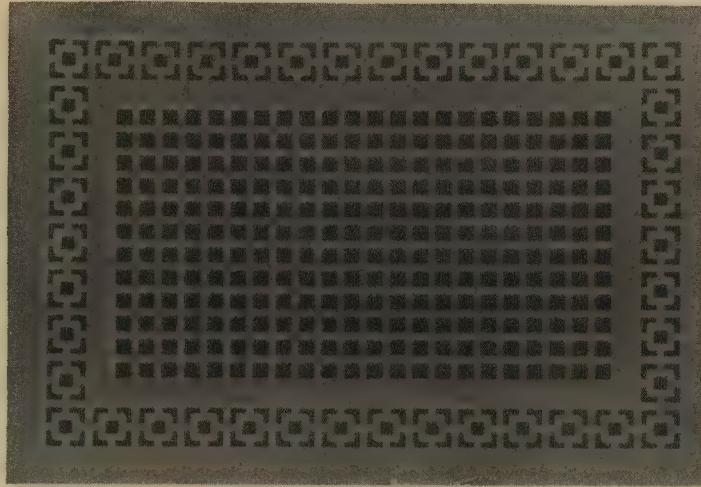
Style MK-55% Open

GRILLES OF PERFORATED METAL

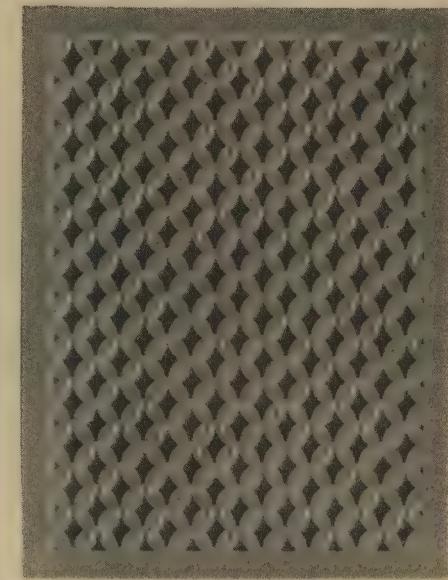
Grilles of Special Design



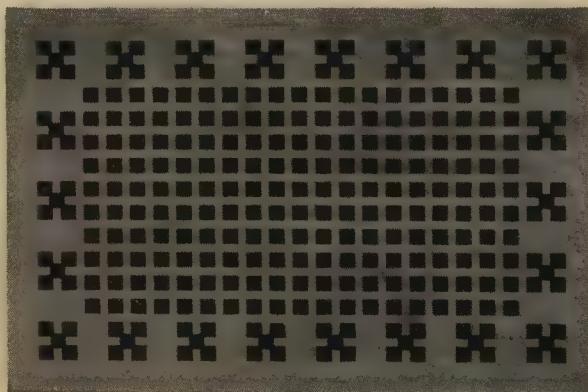
Style QQ



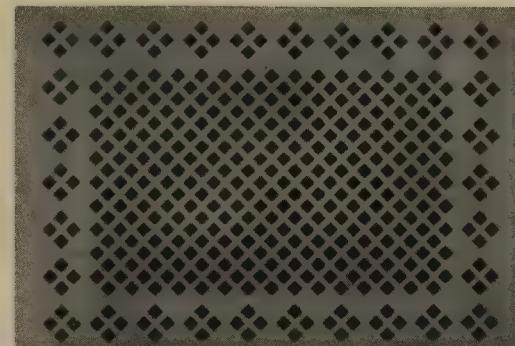
Style AK-50% Open



Style JJ



Style KK-45% Open



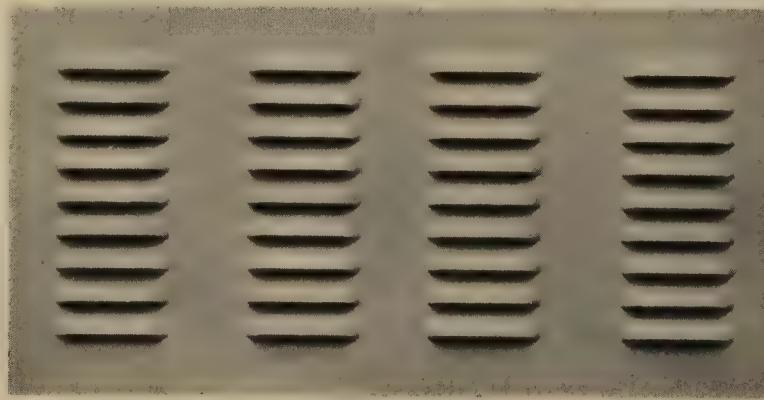
Style DD-45% Open

Fixed Louvers

Used where ventilation is wanted without a view beyond the grille. Furnished in No. 16 gauge steel or bronze.



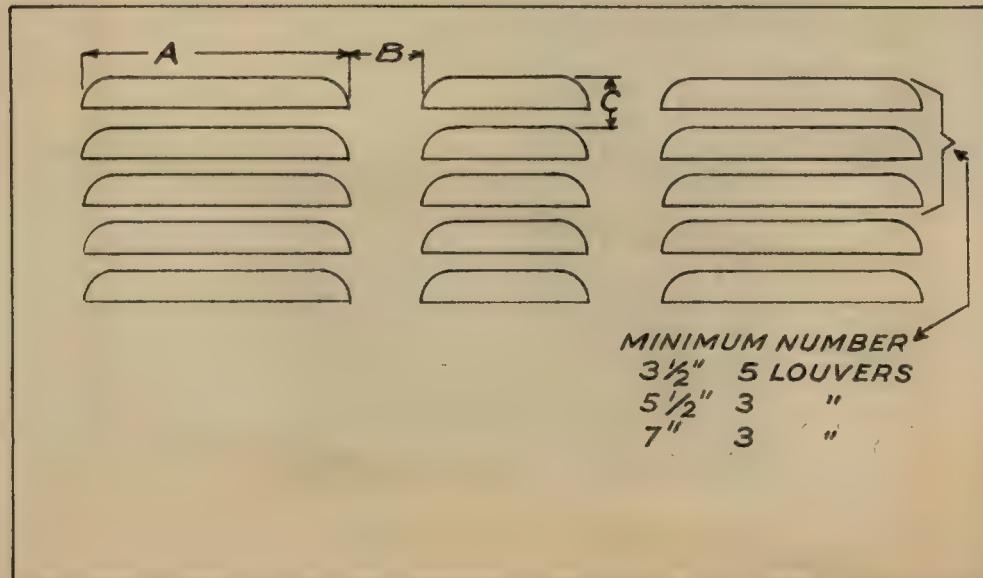
7" Louver



5 1/2" Louver



3 1/2" Louver



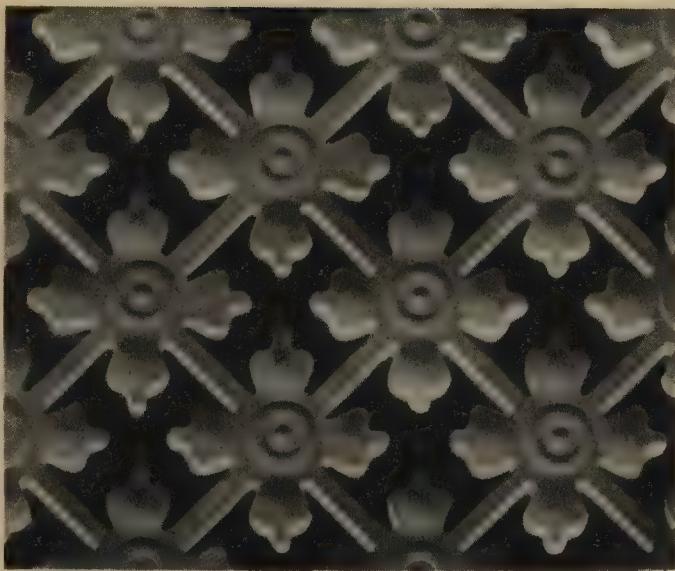
Dimension A.... 3 1/2", 5 1/2" or 7"

Dimension B.... 1 3/4" minimum for 3 1/2" louver
 2 1/2" minimum for 5 1/2" louver
 2 1/2" minimum for 7" louver

Wherever 3 1/2" and 5 1/2" or
 3 1/2" and 7" louvers are ad-
 jacent the 1 3/4" minimum may
 be used.

Dimension C.... Must always be 1".

Style Y Embossed Grille



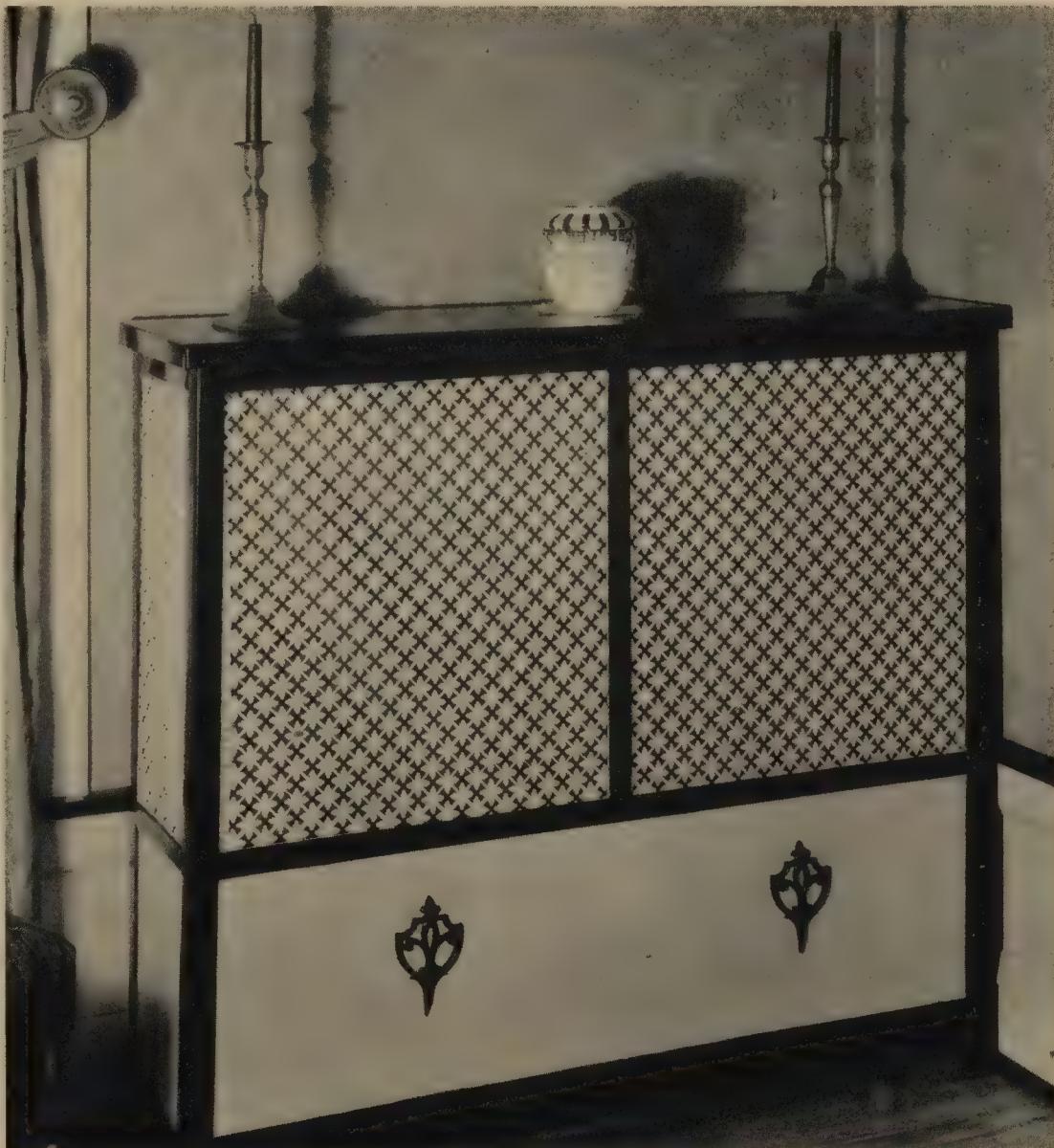
Actual Size Style Y Punched & Embossed
45% Open

This is a design which is a favorite for enclosing radiators, because of its attractive and distinctive appearance and also its high percentage of open area.

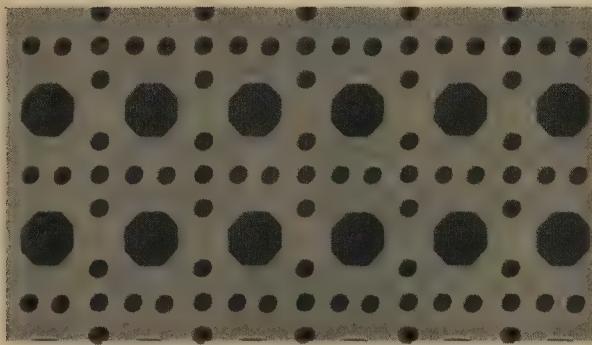
It is made of No. 20 gauge and can be furnished in sheets as large as 42" x 120" but can be cut to smaller size pieces if desired.

The metal used is of the best quality suitable for any finish.

This grille cannot be furnished with blank margins so the edges must always be covered when grille is installed.



Style P Metal Cane (Perforated)



Actual Size Style P Metal Cane
36% Open

This design is used extensively for radiator grilles and enclosures, as well as in metal beds, electric refrigerators, ferneries and other furniture.

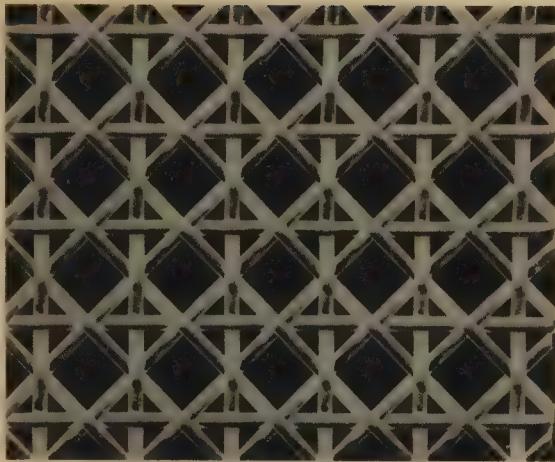
Note that our cane design is made up with the large holes true octagons and not rounds. This gives the material a much better appearance. We use only the best quality of steel which will take fine finishes. Design can also be furnished in bronze.

This design can be furnished in sheets as large as 42" x 120" in gauges ranging from No. 26 to No. 16. It is carried in a number of stock sizes in various gauges.

Special grilles of this design can be made to order with blank margins.



Style W Metalace (Woven Metal Strands)

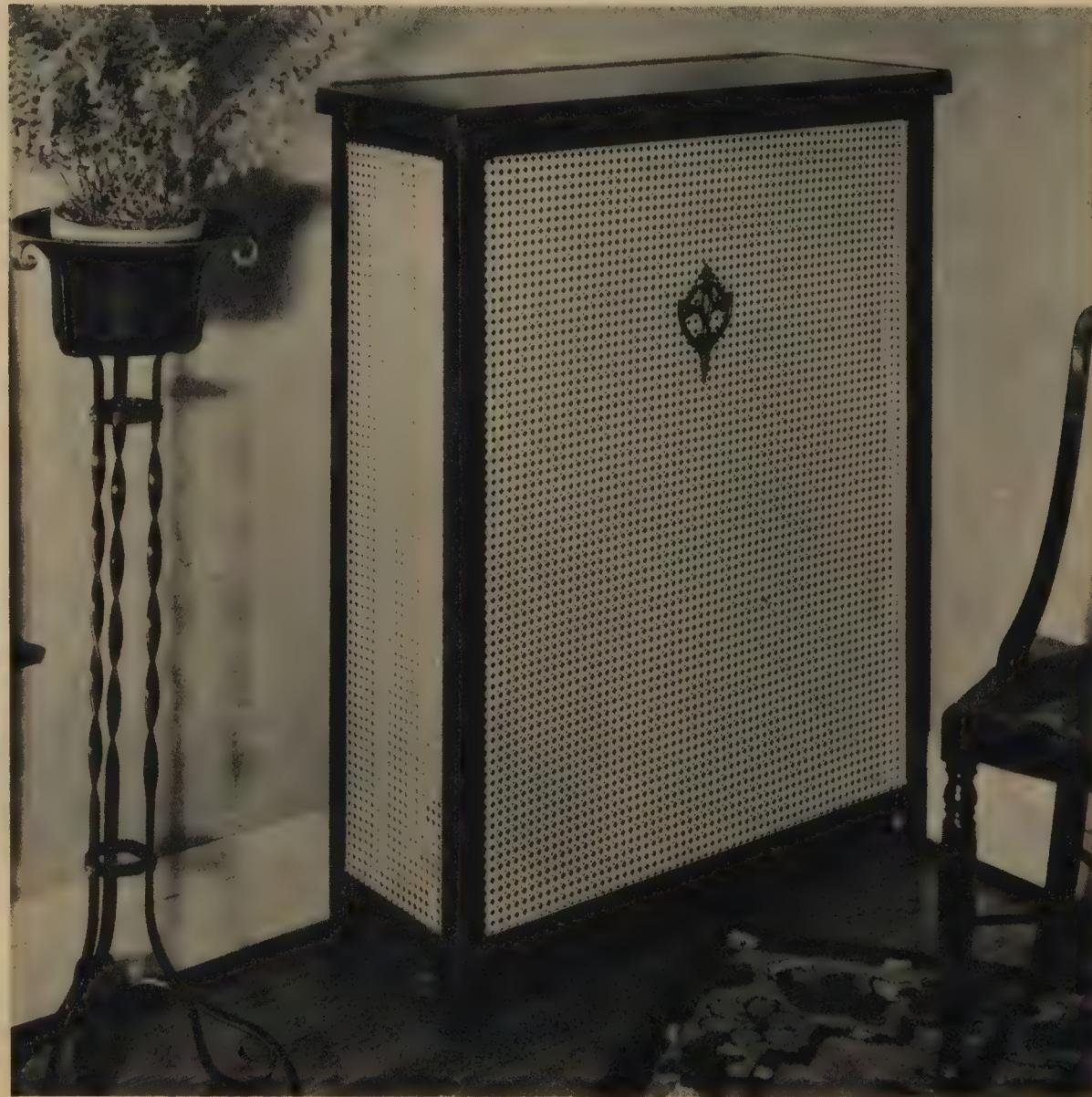


Actual Size Style W Woven Cane
35% Open

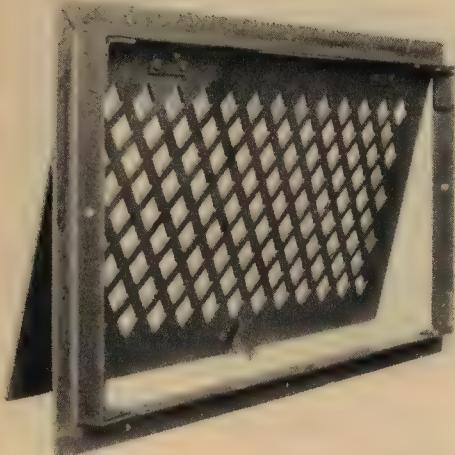
This design is of woven strands of steel or bronze and is an excellent imitation of the natural woven cane.

It is carried in stock in rolls of 50 lineal feet by 36" wide but can be cut to any size pieces and when so furnished we flatten the pieces so that they will present a surface free from buckles when installed.

Metalace cannot be furnished with smooth edges so provision should always be made for fastening and covering up the edges.



Screw Holes and Frames

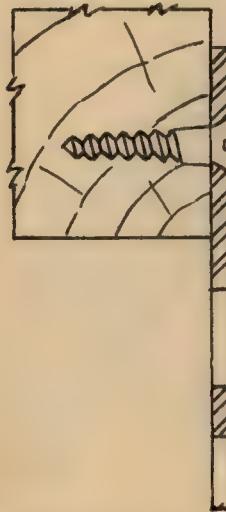


Unless specified, we do not put in screw holes or fit with frames, but we are prepared to do this work if desired.

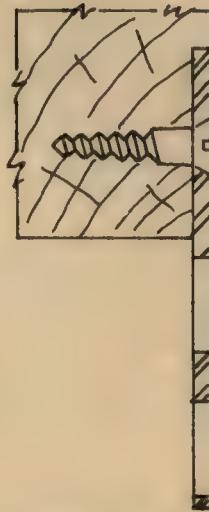
There are many different ways in which grille frames can be made, but we show only a few of the commonly used ones here.

When screw holes are put in they are evenly spaced on about 12 inch centers.

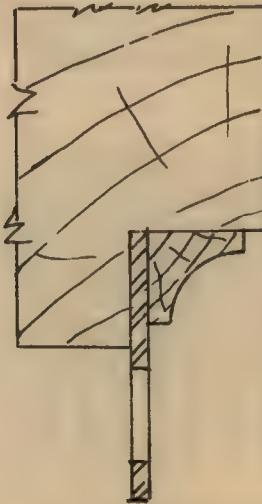
Our frames are carefully made and are thoroughly workmanlike in every detail. In ordering frames specify them by the type letter shown on following sketches



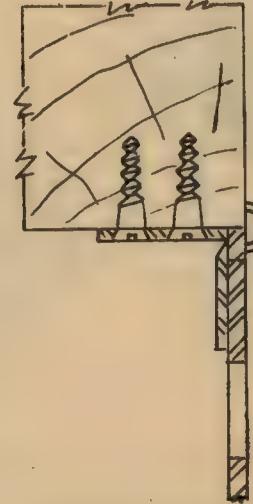
COUNTERSUNK
SCREW HOLES.
USUAL TYPE OF MOUNTING



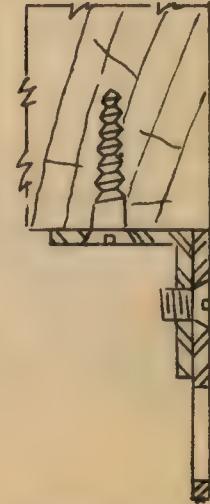
COUNTERSUNK
SCREW HOLES.
MOUNTING USED IN
RADIATOR COVER SEATS



NO SCREW HOLES.
GRILLE HELD BY WOOD MOULD.



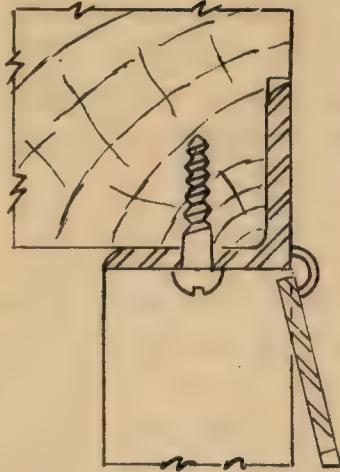
NO FRAME.
GRILLE HINGED TO WOOD
BUCK OR FRAME



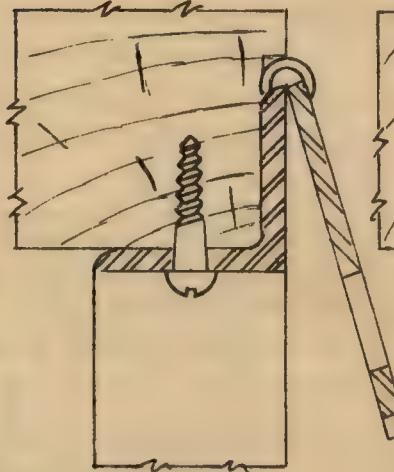
TYPE-A-FRAME
PERMANENT FRAME
REMOVABLE GRILLE

GRILLES OF PERFORATED METAL

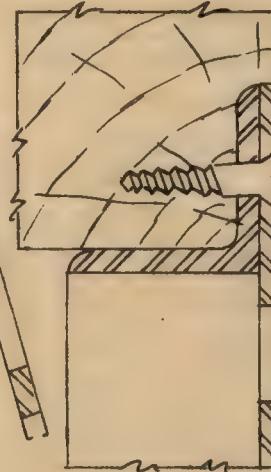
Additional Frame Designs.



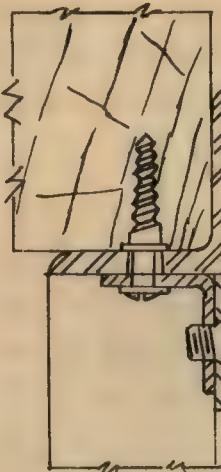
TYPE-B-FRAME
GRILLE HINGED IN FRAME



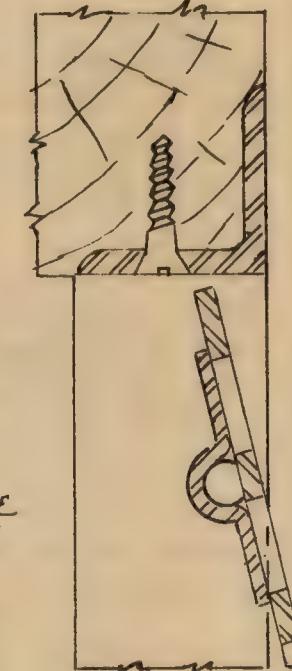
TYPE-C-FRAME
GRILLE HINGED ON FRAME



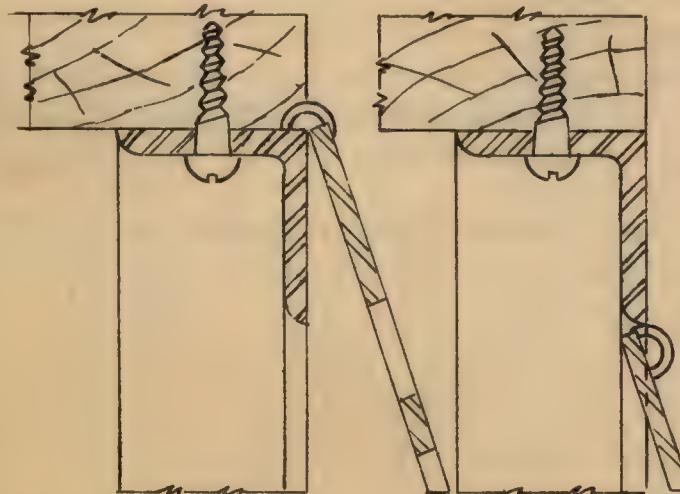
TYPE-D-FRAME
GRILLE AND FRAME
MOUNTED SEPARATELY



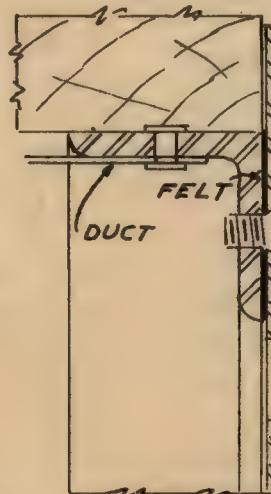
TYPE-E-FRAME
GRILLE MOUNTED IN
FRAME WITH LUGS



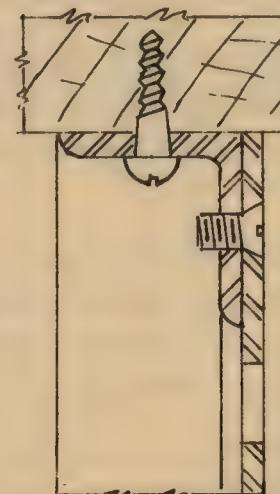
TYPE-F-FRAME
GRILLE MOUNTED WITH
SIDE PIVOT HINGES



TYPE-G-FRAME
GRILLE HINGED ON
ANGLE FRAME



TYPE-H-FRAME
GRILLE HINGED IN
ANGLE FRAME



TYPE-J-FRAME
FOR EXHAUST DUCT
MOUNTING

DESIGN OF GRILLE ENCLOSURES FOR RADIATORS

We are frequently called upon to diagnose trouble where radiators enclosed by one or more grilles are not properly heating the rooms. Almost without exception we find the trouble due to improper design of the radiator enclosure. We have, therefore, made quite a study of this matter and based on this study which involved the analysis of many laboratory tests, we offer for earnest consideration the following recommendations for greatest radiator efficiency.

1. There must be $2\frac{1}{2}$ " space between the wall and the back of a radiator and this same space between the front of the radiator and the grille.

2. The air intake to the radiator should begin at the floor or at most not over 2" from the floor. Where the grille covers entire face of the radiator, let the grille rest on the floor, not on top of the base board.

3. If grilles are at bottom and top of radiator only the bottom grille should have an open area in square inches approximately ten times the heating surface in square feet.

4. Low radiators should always have a grille in the top of the enclosure and this grille should have at least the same length and width as the top of the radiator. Top grilles should be at least $2\frac{1}{2}$ " above top of radiator.

5. High radiators have greater efficiency with grilles above them but this is not quite so important as with low radiators.

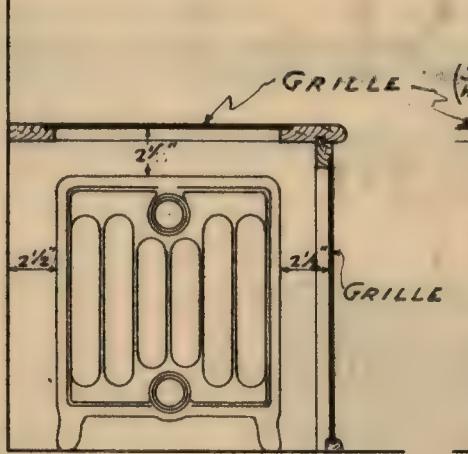
6. When radiators are recessed with grilles in front it is very important that the top of the enclosure be at least five inches above top of radiator and that open area of grille extend to the top line of the enclosure. A curved deflector back and curving over top of radiator will increase the efficiency.

7. Always design the enclosure so that there is an opportunity for the cold air from the floor to sweep in under the radiator and leave at the top, straight up thru a top grille, or deflected outward thru a grille on the face.

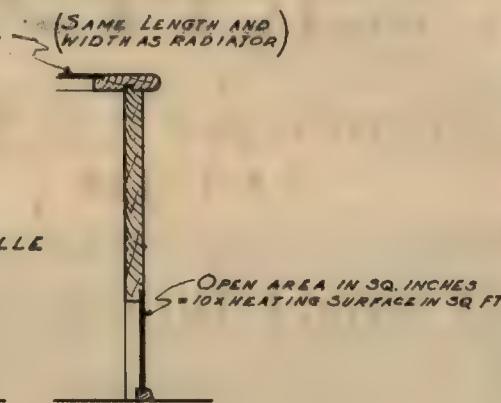
8. Never trap the cold air from reaching the lower part of radiator, nor the warm air from leaving at the top of the radiator.

GRILLES OF PERFORATED METAL

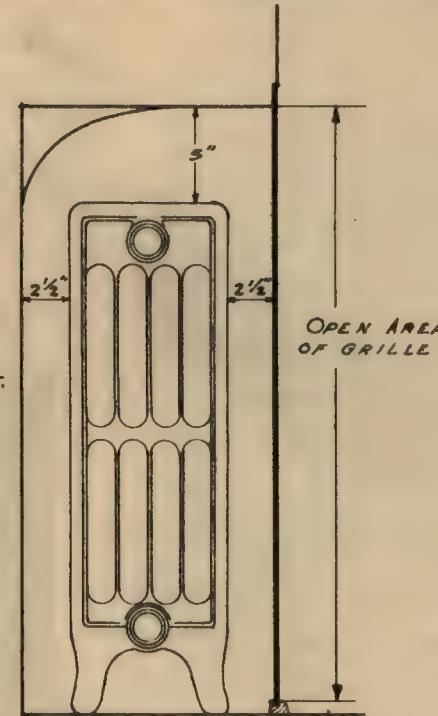
SUGGESTED DESIGNS FOR ENCLOSING RADIATORS



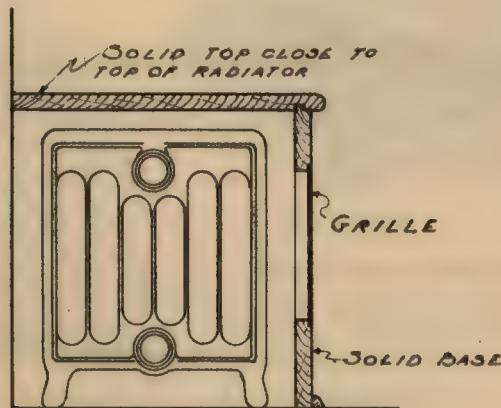
ENCLOSURE 'A'



ENCLOSURE 'B'



ENCLOSURE 'C'

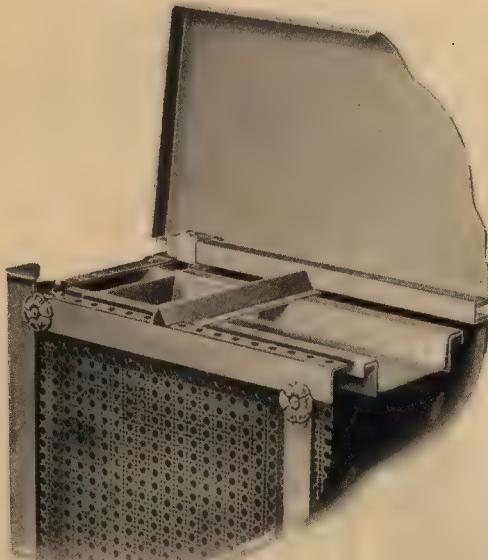


A VERY INEFFICIENT DESIGN

WE RECOMMEND ENCLOSURES A, B & C

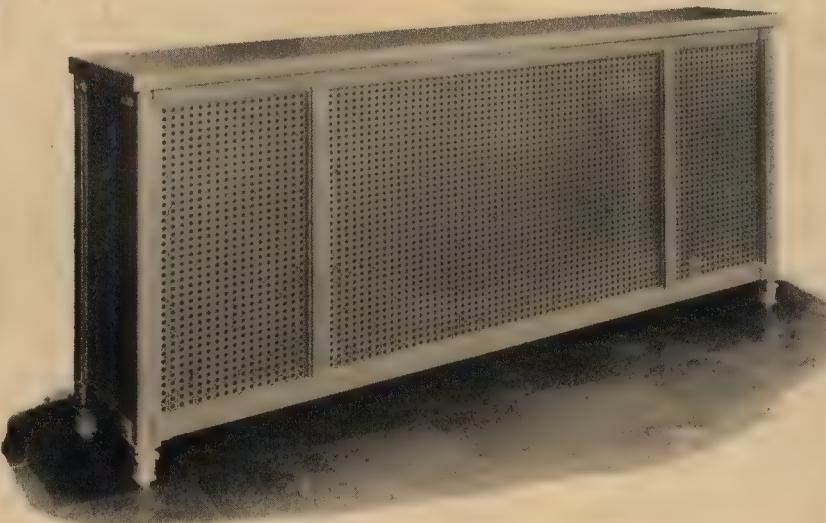
THE ENCLOSURE ON THE LEFT IS FREQUENTLY SEEN THO IT IS A VERY POOR DESIGN- THE COLD AIR CANNOT FLOW IN NOR CAN THE WARM AIR GET OUT.

Standardized Parts for the Construction of Radiator Enclosures

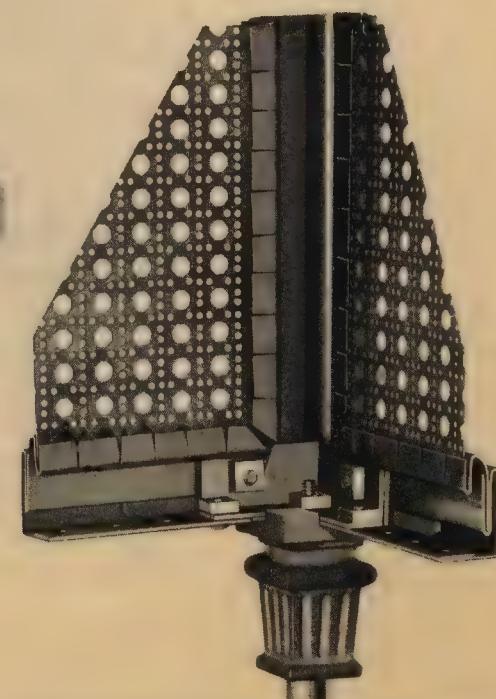


Showing hinged top, water pan and frame construction.

Radiator enclosures are an excellent investment and not an expense because they save their cost in redecorating and cleaning bills. They hide ugly radiators and provide for humidification.



An enclosure made up with bead panel moulding, square rosettes and ornamental cast iron feet.
The handsomest cabinet obtainable.



Showing inside corner construction and ornamental foot which is adjustable for height.

GRILLES OF PERFORATED METAL

Standardized Parts for the Construction of Machinery Guards

The most economical material from which to make all types of Belt and Machine Guards.

These parts bear the labels of the Underwriters Laboratories.

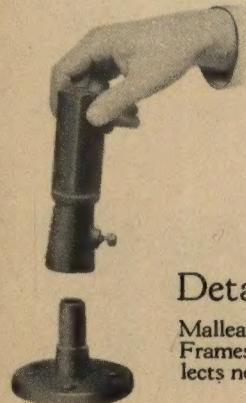
PERFORATED ANGLE



PERFORATED BAND

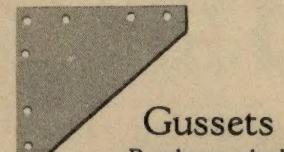
Angles and Bands

Ready punched to fit.
With **Gussets** these
make any size or rec-
tangular Frame — as-
sembled like any bridge
or structural toy.



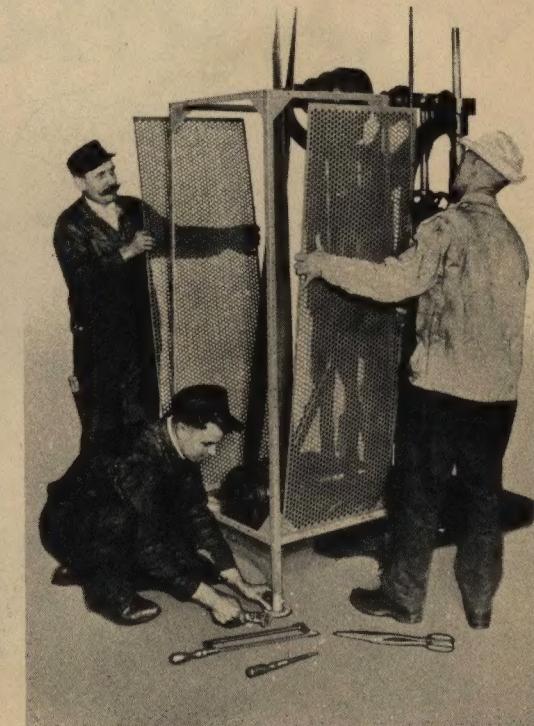
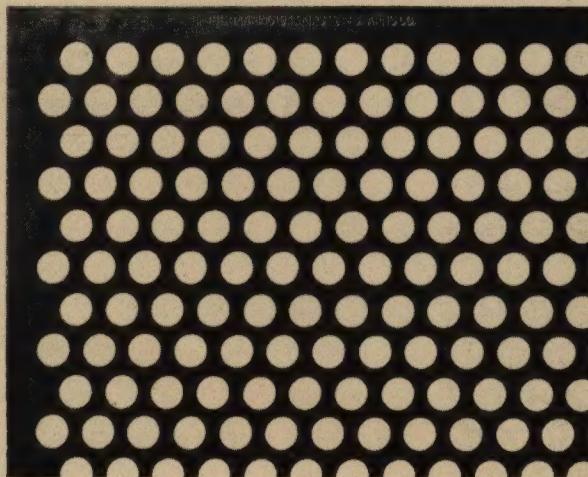
Detachable Floor Posts

Malleable Iron. Ready punched to fit
Frames. Socket DOWNWARD — col-
lects no dirt.



Gussets
Ready punched
to fit.

PERFORATED SHEET
Holes are actually $\frac{1}{4}$ " diameter



This material can be cut to any desired shape and will not tear or stretch. It is easily cleaned, and will not catch or hold particles of waste or cloth used in wiping. It has a smooth surface, with no projections to scratch the hands of workmen.

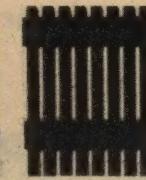
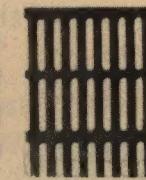
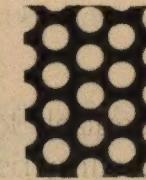
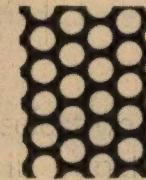
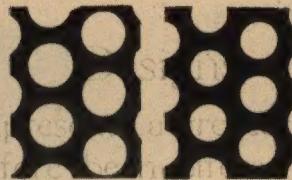
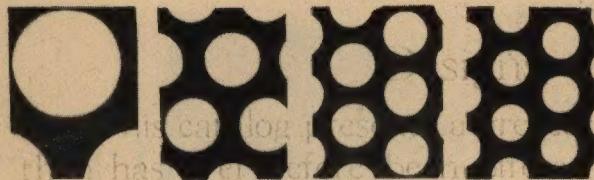
These parts have been designed so that strong sturdy guards can be constructed with the minimum of labor. Guards properly made from these parts are indestructible, are inexpensive to build, provide easy access to machinery and receive quick and positive approval of all safety inspectors.

A special booklet "Belt and Machine Guards" will be sent on request.

THE HARRINGTON & KING PERFORATING CO.

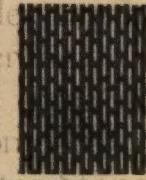
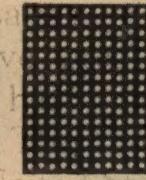
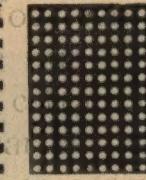
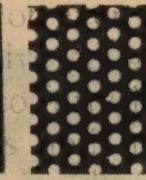
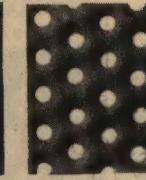
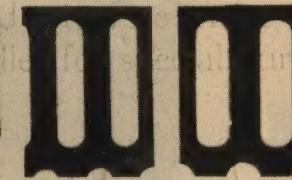
Perforated Metals

Specifications



We are constantly creating new designs and are prepared to make up grilles to architect's drawings where some special motif is desired. Frequently combinations

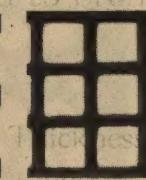
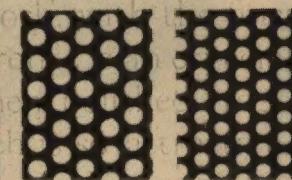
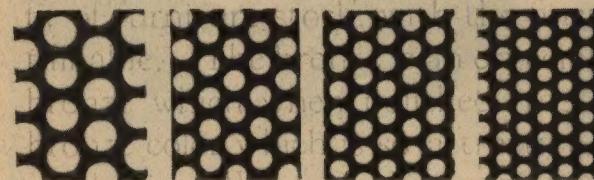
of different designs are used. The thin punched grill has much greater strength than a heavy cast grille. The usual thickness of grilles $24'' \times 24''$ and smaller is twelve



Materials

Our grilles are manufactured of solid steel, bronze, brass and other metals. The steel is the highest quality

gauge which is always used for steel. Unless otherwise specified the Brown & Sharp gauge will be applied to bronze and brass.



so as to insure prompt delivery.

No. 20
No. 18
No. 16
No. 14
No. 8
3/16"

25 to 26 to 27 to 28 to 29 to 30 to 31 to 32 to 33 to 34 to 35 to 36

We are specialists in the manufacture of grilles, but we also manufacture perforated metals of every description ranging in size from $.020''$ diameter to $9''$ diameter with hundreds of sizes in between. Our requirements for size and shape are very wide. Our engineer can have a free hand in laying out grille openings. We impose no limitations in either size or shape.

